

STATE OF MICHIGAN  
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MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
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# Michigan's Nonferrous Metallic Mining Regulations

Natural Resources and Environmental Protection Act  
Act No. 451 of the Public Acts of 1994, as amended

## Part 632



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## NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (EXCERPT)

### Act 451 of 1994, PART 632

#### NONFERROUS METALLIC MINERAL MINING

##### 324.63201 Definitions.

Sec. 63201.

As used in this part:

- (a) "Administratively complete" means an application for a mining permit under this part that is determined by the department to contain all of the documents and information required under this part and any rules promulgated under this part.
- (b) "Affected area" means an area outside of the mining area where the land surface, surface water, groundwater, or air resources are determined through an environmental impact assessment to be potentially affected by mining operations within the proposed mining area.
- (c) "Department" means the department of environmental quality.
- (d) "Emergency management coordinator" means that term as defined in section 2 of the emergency management act, 1976 PA 390, MCL 30.402.
- (e) "Fund" means the nonferrous metallic mineral surveillance fund created in section 63217.
- (f) "Metallic product" means a commercially salable mineral produced primarily for its nonferrous metallic mineral content in its final marketable form or state.
- (g) "Mining" means the excavation or removal of more than 10,000 tons of earth material a year or disturbing more than 1 acre of land a year in the regular operation of a business for the purpose of extracting a nonferrous metallic mineral or minerals by 1 or both of the following:
  - (i) Removing the overburden lying above natural deposits of a mineral and excavating directly from the natural deposits thus exposed or by excavating directly from deposits lying exposed in their natural state.
  - (ii) Excavating from below the surface of the ground by means of shafts, tunnels, or other subsurface openings.
- (h) "Mining area" means an area of land from which earth material is removed in connection with nonferrous metallic mineral mining, the lands on which material from that mining is stored or deposited, the lands on which beneficiating or treatment plants and auxiliary facilities are located, the lands on which the water reservoirs used in the nonferrous metallic mineral mining process are located, and auxiliary lands that are used in connection with the mining.
- (i) "Mining permit" means a permit issued under this part for conducting nonferrous metallic mineral mining and reclamation operations.
- (j) "Nonferrous metallic mineral" means any ore or material to be excavated from the natural deposits on or in the earth for its metallic content, but not primarily for its iron or iron mineral content, to be used for commercial or industrial purposes.
- (k) "Nonferrous metallic mineral operator" or "operator" means a permittee or other person who is engaged in, or who is preparing to engage in, mining operations for nonferrous metallic minerals, whether individually or jointly, or through agents, employees, or contractors.
- (l) "Permittee" means a person who holds a mining permit.
- (m) "Postclosure monitoring period" means a period following closure of a nonferrous metallic mineral mine during which the permittee is required to conduct monitoring of groundwater and surface water.
- (n) "Stockpile" means material, including, but not limited to, surface overburden, rock, or lean ore, that in the process of mining and beneficiation or treatment has been removed from the earth and stored on the surface. Stockpile does not include materials that are being treated in the production of metallic products and the metallic product that has been produced by that operation.
- (o) "Tailings basin" means land on which is deposited, by hydraulic or other means, the material that is separated from the metallic product in the beneficiation or treatment of minerals including any surrounding dikes constructed to contain the

material.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

##### 324.63202 Legislative findings.

Sec. 63202.

The legislature finds that:

- (a) It is the policy of this state to foster the conservation and development of the state's natural resources.
- (b) Discoveries of nonferrous metallic sulfide deposits have resulted in intensive exploration activities and may lead to the development of 1 or more mines.
- (c) Nonferrous metallic sulfide deposits are different from the iron oxide ore deposits currently being mined in Michigan in that the sulfide minerals may react, when exposed to air and water, to form acid rock drainage. If the mineral products and waste materials associated with nonferrous metallic sulfide mining operations are not properly managed and controlled, they can cause significant damage to the environment, impact human health, and degrade the quality of life of the impacted community.
- (d) The special concerns surrounding nonferrous metallic mineral mining warrant additional regulatory measures beyond those applied to the current iron mining operations.
- (e) Nonferrous metallic mineral mining may be an important contributor to Michigan's economic vitality. The economic benefits of nonferrous metallic mineral mining shall occur only under conditions that assure that the environment, natural resources, and public health and welfare are adequately protected.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

##### 324.63203 Nonferrous metallic mineral mining; administration and enforcement; rules; regulation or control by local units of government.

Sec. 63203.

- (1) The department shall administer and enforce this part in order to regulate nonferrous metallic mineral mining. In addition to other powers granted to it, the department may promulgate rules it considers necessary to carry out its duties under this part, including standards for construction, operation, closure, postclosure monitoring, reclamation, and remediation of a nonferrous metallic mineral mine. However, the department shall not promulgate any additional rules under this part after February 15, 2006.
- (2) The department may do either of the following:
  - (a) Enter at all reasonable times in or upon a mining area for the purpose of inspecting and investigating conditions relating to the operation of a mining area. However, an investigation or inspection under this subsection shall comply with the United States constitution, the state constitution of 1963, and this section.
  - (b) Conduct research or enter into contracts related to mining areas and the reclamation of mining areas as may be necessary to implement this part.
- (3) Subject to subsections (4) and (5), a local unit of government shall not regulate or control mining or reclamation activities that are subject to this part, including construction, operation, closure, postclosure monitoring, reclamation, and remediation activities, and does not have jurisdiction concerning the issuance of permits for those activities.
- (4) A local unit of government may enact, maintain, and enforce ordinances, regulations, or resolutions affecting mining operations if the ordinances, regulations, or resolutions do not duplicate, contradict, or conflict with this part. In addition, a local unit of government may enact, maintain, and enforce ordinances, regulations, or resolutions regulating the hours at which mining operations may take place and routes used by vehicles in connection with mining operations. However, such ordinances, regulations, or resolutions shall be reasonable in accommodating customary nonferrous metallic mineral mining operations.
- (5) Subsections (3) and (4) do not prohibit a local unit of government from conducting water quality monitoring.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004 ;-- Am. 2005, Act 299, Imd. Eff. Dec. 21, 2005

### 324.63205 Mining permit; application procedure.

Sec. 63205.

- (1) A person shall not engage in the mining of nonferrous metallic minerals except as authorized in a mining permit issued by the department.
- (2) An application for a mining permit shall be submitted to the department in a format to be developed by the department. The application shall be accompanied by all of the following:
  - (a) A permit application fee of \$5,000.00. The department shall forward all permit application fees received under this section to the state treasurer for deposit in the fund.
  - (b) An environmental impact assessment for the proposed mining operation that describes the natural and human-made features, including, but not limited to, flora, fauna, hydrology, geology, and geochemistry, and baseline conditions in the proposed mining area and the affected area that may be impacted by the mining, and the potential impacts on those features from the proposed mining operation. The environmental impact assessment shall define the affected area and shall address feasible and prudent alternatives.
  - (c) A mining, reclamation, and environmental protection plan for the proposed mining operation, including beneficiation operations, that will reasonably minimize the actual and potential adverse impacts on natural resources, the environment, and public health and safety within the mining area and the affected area. The plan shall address the unique issues associated with nonferrous metallic mining and shall include all of the following:
    - (i) A description of materials, methods, and techniques that will be utilized.
    - (ii) Information that demonstrates that all methods, materials, and techniques proposed to be utilized are capable of accomplishing their stated objectives in protecting the environment and public health, except that such information may not be required for methods, materials, and techniques that are widely used in mining or other industries and are generally accepted as effective. The required information may consist of results of actual testing, modeling, documentation by credible independent testing and certification organizations, or documented applications in similar uses and settings.
  - (iii) Plans and schedules for interim and final reclamation of the mining area following cessation of mining operations.
  - (iv) A description of the geochemistry of the ore, waste rock, overburden, peripheral rock, and tailings, including characterization of leachability and reactivity.
  - (v) Provisions for the prevention, control, and monitoring of acid-forming waste products and other waste products from the mining process so as to prevent leaching into groundwater or runoff into surface water.
  - (d) A contingency plan that includes an assessment of the risk to the environment or public health and safety associated with potential significant incidents or failures and describes the operator's notification and response plans. When the application is submitted to the department, the applicant shall provide a copy of the contingency plan to each emergency management coordinator having jurisdiction over the affected area.
  - (e) Financial assurance as described in section 63211.
  - (f) A list of other state and federal permits that are anticipated to be required.
- (3) The applicant has the burden of establishing that the terms and conditions set forth in the permit application; mining, reclamation, and environmental protection plan; and environmental impact assessment will result in a mining operation that reasonably minimizes actual or potential adverse impacts on air, water, and other natural resources and meets the requirements of this act.
- (4) Effective 14 days after the department receives an application for a mining permit, the application shall be considered to be administratively complete unless the department proceeds as provided under subsection (5).
- (5) If, before the expiration of the 14-day period under subsection (4), the department notifies the applicant that the application is not administratively complete, specifying the information necessary to make the application administratively complete, or notifies the applicant that the fee required to accompany the application has not been paid, specifying the amount due, the running of the 14-day period under subsection (4) is tolled until the applicant submits to the department the specified information or fee amount due. The notice shall be given in writing or electronically.
- (6) Within 42 days after an application for a mining permit is determined to be administratively complete, the department shall

hold a public meeting on the application. The department shall give notice of the public meeting not less than 14 or more than 28 days before the date of the public meeting. The notice shall specify the time and place of the public meeting, which shall be held in the county where the proposed mining operation is located, and shall include information on how to review a copy of the application. The notice shall be given in writing to the city, village, or township and the county where the proposed mining operation is to be located and to all affected federally recognized Indian tribes in this state. The notice shall also be given by publication in a newspaper of local distribution in the area where the proposed mining operation is to be located.

(7) The department shall accept written public comment on the permit application for 28 days following the public meeting under subsection (6). Within 28 days after the expiration of the public comment period, the department shall reach a proposed decision to grant or deny a mining permit and shall establish a time and place for a public hearing on the proposed decision. The department shall give notice of the public hearing not less than 14 or more than 28 days before the date of the public hearing. The notice shall be given in writing to the city, village, or township and the county where the proposed mining operation is to be located and to all affected federally recognized Indian tribes in this state. The notice shall also be given by publication in a newspaper of local distribution in the area where the proposed mining operation is to be located. The notice shall contain all of the following:

- (a) A summary of the permit application.
- (b) Information on how to review a complete copy of the application. The application shall be made available at a public location in the area.
- (c) A listing of other permits and hearings that are pending or anticipated under this act with respect to the proposed mining operation.
- (d) The time and place of the public hearing, which shall be held in the area where the proposed mining operation is located.

(8) The department shall accept written public comment on the proposed decision to grant or deny a mining permit for 28 days following the public hearing. At the expiration of the public comment period, the department shall issue a report summarizing all comments received and providing the department's response to the comments.

(9) Within 28 days after the expiration of the public comment period under subsection (8), the department shall grant or deny the mining permit application in writing. A determination that an application is administratively complete does not preclude the department from requiring additional information from the applicant. The 28-day period under this subsection shall be tolled until such time as the applicant submits the requested information. If a mining permit is denied, the reasons shall be stated in a written report to the applicant.

(10) A mining permit shall not be issued or transferred to a person if the department has determined that person to be in violation of this part, rules promulgated under this part, the permit, or an order of the department under this part, unless the person has corrected the violation or the person has agreed in writing to correct the violation pursuant to a compliance schedule approved by the department.

(11) Subject to subsection (10), the department shall approve a mining permit if it determines both of the following:

- (a) The permit application meets the requirements of this part.
- (b) The proposed mining operation will not pollute, impair, or destroy the air, water, or other natural resources or the public trust in those resources, in accordance with part 17 of this act. In making this determination, the department shall take into account the extent to which other permit determinations afford protection to natural resources. For the purposes of this subsection, excavation and removal of nonferrous metallic minerals and of associated overburden and waste rock, in and of itself, does not constitute pollution, impairment, or destruction of those natural resources.

(12) The department shall deny a mining permit if it determines the requirements of subsection (11) have not been met.

(13) Terms and conditions that are set forth in the permit application and the mining, reclamation, and environmental protection plan and that are approved by the department shall be incorporated in and become a part of the mining permit.

(14) A mining permit is not effective until all other permits required under this act for the proposed mining operation are obtained.

(15) If a person submits an application for a mining permit and 1 or more other permits under this act with respect to a particular mining operation, the department may process the applications in a coordinated fashion to the extent feasible given procedural requirements applicable to individual permits. The coordinated permit process may include consolidating public hearings under this part with public hearings required under other parts of this act. Any notice of a consolidated public hearing

shall state clearly which permits are to be considered at the public hearing. An applicant may waive any required timelines under subsections (4) to (9) to facilitate the coordination.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

**324.63207 Mining permit; duration; termination; revocation; transfer; amendment.**

Sec. 63207.

- (1) A mining permit issued by the department shall remain in effect until terminated or revoked by the department.
- (2) The department may terminate a mining permit under 1 or more of the following conditions:
  - (a) The permittee has not commenced construction of plant facilities or conducted actual mining activities covered by the mining permit within 2 years after the effective date of the mining permit.
  - (b) The permittee has completed final reclamation of the mining area and requests the termination of the mining permit and the department determines all of the following:
    - (i) The mining operation has not polluted, impaired, or destroyed the air, water, or other natural resources or the public trust in those resources by activities conducted within the scope of the permit.
    - (ii) The permittee has otherwise fulfilled all conditions determined to be necessary by the department to protect the public health, safety, and welfare and the environment.
    - (iii) The requirements for the postclosure monitoring period have been satisfied.
  - (3) The department may revoke a mining permit pursuant to section 63221.
  - (4) A mining permit may be transferred to a new operator with approval of the department after public notice as follows:
    - (a) The person acquiring the mining permit shall submit to the department on forms provided by the department a request for transfer of the mining permit and shall provide the financial assurance required under section 63211.
    - (b) The person acquiring the mining permit shall accept the conditions of the existing mining permit and adhere to the requirements set forth in this part.
    - (c) If the permittee is determined by the department to be in violation of this part or the rules promulgated under this part at the mining site involved in the transfer, then the mining permit shall not be transferred to a person until the permittee has completed the necessary corrective actions or the person acquiring the mining permit has entered into a written consent agreement to correct all of the violations.
  - (5) Pending the transfer of an existing mining permit under subsection (4), the proposed transferee shall not operate the mine.
  - (6) A mining permit may be amended as follows:
    - (a) The permittee may submit to the department a request to amend the mining permit to address anticipated changes in the mining operation, including, if applicable, amendments to the environmental impact assessment and to the mining, reclamation, and environmental protection plan.
    - (b) The department may require a mining permit to be amended if the department determines that the terms and conditions of the mining permit are not providing the intended reasonable protection of the environment, natural resources, or public health and safety.
    - (c) Within 30 days after receiving a request to amend a mining permit, or upon a determination by the department that an amendment is necessary, the department shall determine within 30 days whether the request constitutes a significant change from the conditions of the approved mining permit. If the department determines that the request is a significant change from the conditions of the approved mining permit, the department may submit the request for amendment to the same review process as provided for a new permit application in section 63205(4) to (9). If a request to amend the mining permit is denied, the reasons for denial shall be stated in a written report to the permittee. If the department determines that the request for amendment does not constitute a significant change from the conditions of the approved mining permit, the department shall provide written notice of the determination to the city, village, or township and the county where the proposed mining operation is to be located and to all affected federally recognized Indian tribes in this state. The department shall also give

notice of the determination by publication in a newspaper of local distribution in the area where the proposed mining operation is to be located. The department shall approve the amendment within 14 days after publication of the notice and shall notify the permittee of the approval.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

**324.63209 Duties of permittee.**

Sec. 63209.

- (1) A permittee shall comply with all other applicable permit standards under this act.
  - (2) A permittee shall conduct reclamation activities at a mining area in accordance with the approved mining, reclamation, and environmental protection plan.
  - (3) If mining operations are suspended for a continuous period exceeding 90 days, the permittee shall take actions to maintain, monitor, and secure the mining area and shall conduct any interim sloping or stabilizing of surfaces necessary to protect the environment, natural resources, or public health and safety in accordance with the permit.
  - (4) Subject to subsection (5), a permittee shall begin final reclamation of a mining area within 3 years of the date of cessation of mining operations and shall complete reclamation within the time set forth in the mining, reclamation, and environmental protection plan approved by the department.
  - (5) Upon written request of a permittee, the department may approve an extension of time to begin or complete final reclamation.
  - (6) A permittee shall conduct groundwater and surface water monitoring in accordance with the provisions of the permit during mining operations and during the postclosure monitoring period. The postclosure monitoring period shall be 20 years following cessation of mining, subject to the following conditions:
    - (a) The permittee shall provide to the department a written request to terminate the postclosure monitoring not less than 18 months before the proposed termination date and shall provide the department with technical data and information demonstrating the basis for the termination. The department shall extend the postclosure monitoring period in increments of up to 20 years unless the department determines, approximately 1 year before the end of a postclosure monitoring period or postclosure incremental monitoring period, that there is no significant potential for water contamination resulting from the mining operation.
    - (b) The department may shorten the postclosure monitoring period at any time upon determining that there is no significant potential for water contamination resulting from the mining operation.
  - (7) The department may extend or shorten the postclosure monitoring period under subsection (6) only after public notice and opportunity for a public hearing under section 63219(2).
  - (8) Both the mining area and the affected area shall be reclaimed and remediated to achieve a self-sustaining ecosystem appropriate for the region that does not require perpetual care following closure and with the goal that the affected area shall be returned to the ecological conditions that approximate premining conditions subject to changes caused by nonmining activities or other natural events. Any portion of the mining area owned by the applicant may be used for any legal purposes.
  - (9) Compliance with the provisions of this part does not relieve a person of the obligation to comply with all other applicable tribal, state, federal, or local statutes, regulations, or ordinances.
- History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

**324.63211 Financial assurance.**

Sec. 63211.

- (1) An operator shall maintain financial assurance during mining operations until the department determines that all reclamation has been completed and for a postclosure monitoring period as determined under section 63209(6) and (7), except that financial assurance shall be released immediately upon termination of a mining permit under section 63207(2)(a).
- (2) The financial assurance required under subsection (1) shall apply to all mining and reclamation operations subject to the mining permit and be sufficient to cover the cost to administer, and to hire a third party to implement, reclamation under the mining, reclamation, and environmental protection plan as well as necessary environmental protection measures, including

remediation of any contamination of the air, surface water, or groundwater that is in violation of the mining permit. The financial assurance shall consist of a conformance bond, escrow, cash, certificate of deposit, irrevocable letter of credit, or other equivalent security, or any combination thereof, covering at least 75% of the total required amount. Financial assurance for the balance of the required total amount, if any, shall consist of a statement of financial responsibility.

(3) Every 3 years, or as the department considers necessary, a permittee shall update the statement of financial responsibility required under subsection (2) and shall adjust the conformance bond, escrow, cash, certificate of deposit, irrevocable letter of credit, or other security, as applicable, to assure that the financial assurance is sufficient for the purposes of subsection (2).

(4) The financial assurance mechanism required by this section may be satisfied in whole or in part by financial assurance provisions required by other parts of this act if those provisions address the remediation activities required under this part.

(5) Failure to provide financial assurance under this section constitutes grounds for the department to order immediate suspension of activities at a mining operation, including the removal of metallic product from the site, pursuant to section 63221.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

### **324.63213 Mining and reclamation report.**

Sec. 63213.

(1) A permittee shall file with the department a mining and reclamation report on or before March 15 of each year, during the period the mine is operating and during the postclosure monitoring period. The mining and reclamation report shall contain all of the following:

(a) A description of the status of mining and reclamation operations.

(b) An update of the contingency plan. The permittee shall provide a copy of the update to the emergency management coordinator.

(c) A report of monitoring results for the preceding calendar year.

(d) A report of the total tons of material mined from the mining area, and the amount of metallic product by weight, produced from the nonferrous metallic mineral mine for the preceding calendar year.

(e) A list of the reports required under subsection (2) for the preceding calendar year.

(2) A permittee shall promptly notify the department and each emergency management coordinator having jurisdiction over the affected area of any incident, act of nature, or exceedance of a permit standard or condition at a mining operation that has created, or may create, a threat to the environment, natural resources, or public health and safety.

(3) Records upon which the mining and reclamation reports are based shall be preserved by the permittee for 3 years and made available to the department upon request.

(4) Records upon which incident reports under subsection (2) are based shall be preserved by the permittee for 3 years or until the end of the postclosure monitoring period, whichever is later.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

### **324.63215 Surveillance fee.**

Sec. 63215.

(1) For purposes of surveillance, monitoring, administration, and enforcement of this part, the department shall assess a permittee a nonferrous metallic mineral surveillance fee of not more than 5 cents per ton of material mined from the mining area as reported under section 63213(1)(d), but not less than \$5,000.00, for each calendar year the mine is in operation and during the postclosure monitoring period. Surveillance fees collected under this section shall be forwarded to the state treasurer for deposit in the nonferrous metallic mineral surveillance fund created in section 63217. The surveillance fee rate shall be calculated each year as follows:

(a) The department shall determine the total tons of material mined from mining areas in this state in the prior calendar year.

(b) The department shall calculate the adjusted appropriation by deducting any unexpended money in the fund at the close of the prior fiscal year from the amount appropriated for the current fiscal year for surveillance, monitoring, administration, and

enforcement of this part.

(c) The fee rate shall be the ratio, to the nearest 1/100 of 1%, of the adjusted appropriation to the total tons of material mined.

(2) The nonferrous metallic mineral surveillance fee described in subsection (1) is due by 30 days after the department sends written notice to the permittee of the amount due.

(3) A penalty equal to 10% of the amount due, or \$1,000.00, whichever is greater, shall be assessed against the permittee for a metallic mineral surveillance fee that is not paid when due. The department may file an action in the circuit court for Ingham county to collect the unpaid fee and penalty. The unpaid fee and penalty shall constitute a debt and become the basis of a judgment against the permittee.

(4) Penalties paid pursuant to this section shall be used for the implementation, administration, and enforcement of this part.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

### **324.63217 Nonferrous metallic mineral surveillance fund.**

Sec. 63217.

(1) The nonferrous metallic mineral surveillance fund is created within the state treasury.

(2) The state treasurer may receive money or other assets from any source for deposit into the fund. The state treasurer shall direct the investment of the fund. The state treasurer shall credit to the fund interest and earnings from fund investments.

(3) Unexpended money in the fund at the close of the fiscal year shall remain in the fund and be carried over to the succeeding fiscal year.

(4) The department shall expend money from the fund, upon appropriation, only for surveillance, monitoring, administration, and enforcement under this part.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

### **324.63219 Contested case hearing.**

Sec. 63219.

(1) A person who is aggrieved by an order, action, or inaction of the department or by the issuance, denial, revocation, or amendment of a mining permit under this part may file a petition with the department requesting a contested case hearing, under the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328. A petition filed more than 60 days after an order, action, or inaction of the department or an action on a mining permit may be rejected as being untimely.

(2) Any hearing under this part shall be held pursuant to the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328. The department shall provide notice of the hearing and shall mail copies of the notice to the person requesting the hearing and to the city, village, or township and the county where the proposed mining operation is to be located and to all affected federally recognized Indian tribes in this state. The department shall publish notice of the hearing in a newspaper of local distribution in the area of the mining operation at least 10 days before the hearing.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

### **324.63221 Violations.**

Sec. 63221.

(1) If the department determines that an operator has violated this part, a rule promulgated under this part, or a mining permit issued under this part, the department shall require the operator to correct the violation.

(2) If the department determines that a violation under subsection (1) is causing or resulting in an imminent and substantial endangerment to the public health or safety, environment, or natural resources, the department shall take action necessary to abate or eliminate the endangerment. Such action may include 1 or more of the following:

(a) Revoking the mining permit.

(b) Issuing an order to the operator requiring immediate suspension of activities at the mining operation, including the removal of metallic product from the site.



- (c) Issuing an order to the operator to undertake such other response actions as may be necessary to abate or eliminate the endangerment.
- (3) Before taking action under this section to suspend operations or revoke a mining permit, or to otherwise prevent the continuation of mining operations, the department shall give written notice, in person or by mail, to the operator. Subject to subsection (4), the department shall provide the operator an opportunity for an evidentiary hearing.
- (4) If the department finds that emergency action is required to protect the public health, safety, or welfare, or to protect the environment, the department may issue an emergency order without a public hearing to require an operator to suspend operations or to take other corrective actions. An emergency order shall remain in force and effect for not more than 21 days.
- (5) If the operator or surety fails or neglects to correct the violation or take corrective actions as specified under an order of the department, the department may, after giving written notice to the operator and surety, enter in or upon the mining area and upon and across any private or public property necessary to reach the mining area and take whatever action is necessary to curtail and remediate any damage to the environment and public health resulting from the violation, and the operator and surety are jointly and severally liable for all expenses incurred by the department. The claim shall be paid by the operator or surety within 30 days, and, if the claim is not paid within that time, the department may bring suit against the operator or surety, jointly or severally, for the collection of the claim in any court of competent jurisdiction. This part does not limit the department's authority to take whatever response activities it determines necessary to protect the public health, safety, and welfare and the environment.
- (6) The revocation of a mining permit or suspension of activities under subsection (2) does not relieve a permittee of the responsibility to complete reclamation, maintain financial assurance required under section 63211, and undertake all appropriate measures to protect the environment, natural resources, and public health and safety.
- (7) If the department receives an allegation of improper action under or a violation of this part, a rule promulgated under this part, or a condition of a permit issued under this part, and the person making the allegation provides evidence or corroboration sufficient to support the allegation, as determined by the department, the department shall do all of the following:
- (a) Make a record of the allegation.
- (b) Conduct an inspection of the mining operation to investigate the allegation not more than 5 business days after receipt of the complaint or allegation. If the complaint or allegation is of a highly serious nature, as determined by the department, the mining operation shall be inspected as quickly as possible. However, an investigation or inspection under this subsection shall comply with the United States constitution, the state constitution of 1963, and this section.
- (c) Not more than 15 business days after completing an investigation of the allegation, make a written report of the allegation and the results of the investigation to the operator and the person who made the allegation.
- (8) The department shall comply with the administrative procedures act of 1969, 1969 PA 306, MCL 24.201 to 24.328, in its actions under this section.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

**324.63223 Civil action; commencement; jurisdiction; relief; fine; violation as felony; penalties; lien.**

Sec. 63223.

- (1) The department may request the attorney general to commence a civil action for appropriate relief, including a permanent or temporary injunction, for a violation of this part or a provision of a permit or order issued or rule promulgated under this part. An action under this subsection may be brought in the circuit court for the county of Ingham or for the county in which the defendant is located, resides, or is doing business. The court has jurisdiction to restrain the violation and to require compliance. In addition to any other relief granted under this subsection, the court may impose a civil fine of not less than \$2,500.00, and the court may award reasonable attorney fees and costs to the prevailing party. The maximum fine imposed by the court shall be not more than \$25,000.00 per day of violation.
- (2) Upon a finding by the court that an operator has violated this part or a provision of a permit or order issued or rule promulgated under this part, and that the violation poses or posed a substantial endangerment to the public health, safety, or welfare, the court shall impose, in addition to the sanctions set forth in subsection (1), a fine of not less than \$500,000.00 and

not more than \$5,000,000.00.

- (3) The attorney general may file a civil suit in a court of competent jurisdiction to recover, in addition to a fine, the full value of the injuries done to the natural resources of this state and the costs of surveillance and enforcement by the state resulting from the violation.
- (4) A person who on or after February 1, 2005 intentionally makes a false statement, representation, or certification in an application for or form pertaining to a permit under this part or in a notice or report required by the terms and conditions of a permit issued under this part is guilty of a felony and may be imprisoned for not more than 2 years and shall be fined not less than \$2,500.00 or more than \$25,000.00 for each violation. If the conviction is for a violation committed after a first conviction of the person under this subsection, the court shall impose a fine of not less than \$25,000.00 per day and not more than \$50,000.00 per day of violation. With the exception of the issuance of criminal complaints, issuance of warrants, and the holding of an arraignment, the circuit court for the county in which the violation occurred has exclusive jurisdiction. Knowledge possessed by a person other than the defendant under this subsection may be attributable to the defendant if the defendant took affirmative steps to shield himself or herself from the relevant information.
- (5) Upon a finding by the court that the actions taken by a criminal defendant on or after February 1, 2005 pose or posed a substantial endangerment to the public health, safety, or welfare, the court shall impose, in addition to the penalties set forth in subsection (2), a sentence of 5 years' imprisonment and a fine of not less than \$1,000,000.00.
- (6) To find a defendant civilly or criminally liable for substantial endangerment under subsection (2) or (5), the court shall determine that the defendant knowingly or recklessly acted in such a manner as to cause a danger of death or serious bodily injury and that either of the following occurred:
- (a) The defendant had an actual awareness, belief, or understanding that his or her conduct would cause a substantial danger of death or serious bodily injury.
- (b) The defendant acted in gross disregard of the standard of care that any reasonable person should observe in similar circumstances.
- (7) A civil fine or other civil award imposed under this section is payable to this state and shall be credited to the general fund. The fine constitutes a lien on any property, of any nature or kind, owned by the defendant.
- (8) A lien under subsection (7) is effective and has priority over all other liens and encumbrances except those filed or recorded prior to the date of judgment only if notice of the lien is filed or recorded as required by state or federal law.
- (9) A lien filed or recorded pursuant to subsection (8) shall be terminated according to the procedures required by state or federal law within 14 days after the fine or other award ordered to be paid is paid.
- (10) If a violation of this part also constitutes a violation of another part of this act, a court may apply a civil fine or penalty for the violation, and each day of continued violation, in accordance with and subject to the penalty limits of the other part.

History: Add. 2004, Act 449, Imd. Eff. Dec. 27, 2004

PART 632 NONFERROUS METALLIC MINERAL MINING

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF GEOLOGICAL SURVEY  
NONFERROUS METALLIC MINERAL MINING**

Filed with the Secretary of State on February 2, 2006 These rules become effective immediately upon filing with the Secretary of State unless adopted under sections 33, 44, or 45a(6) of 1969 PA 306, MCL 24.233, MCL 24.244, and MCL 24.245.

(By authority conferred on the director of the department of environmental quality by section 63203(1) of 1994 PA 451, MCL 324.63203(1)) R 425.101, R 425.102, R 425.103, R 425.201, R 425.202, R 425.203, R 425.204, R 425.205, R 425.206, R 425.207, R 425.301, R 425.302, R 425.303, R 425.304, R 425.305, R 425.306, R 425.307, R 425.308, R 425.309, R 425.401, R 425.402, R 425.403, R 425.404, R 425.405, R 425.406, R 425.407, R 425.408, R 425.409, R 425.501, R 425.502, R 425.503, R 425.601, and R 425.602 are added to the Michigan Administrative Code as follows:

**PART 1. GENERAL PROVISIONS**

**R 425.101 Purpose.**

Rule 101. These rules implement the act, and regulate the construction, operation, closure, postclosure monitoring, reclamation, and remediation of nonferrous metallic mineral mines in the state of Michigan. These rules do not regulate the extraction of metallic minerals by in situ leaching when regulated under part 625 of the act.

**R 425.102 Definitions; A to L.**

Rule 102. (1) As used in these rules:

- (a) "Accelerated soil erosion" means the increased loss of the land surface that occurs as a result of human activities.
- (b) "Act" means 1994 PA 451, MCL 324.101 et seq.
- (c) "Aquifer" means a geological formation, group of formations, or part of a formation capable of yielding significant quantities of groundwater to wells or springs.
- (d) "Assurance instrument" means a financial instrument executed in favor of the department on a form approved by the department, including the following:
  - (i) A surety bond executed by a surety company authorized to do business in the state of Michigan.
  - (ii) A certificate of deposit or time deposit account held by a financial institution regulated and examined by a state or federal agency, the value of which is insured by an agency of the United States government.
  - (iii) A cash bond.
  - (iv) An irrevocable letter of credit issued by a financial institution which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.
  - (v) A trust fund managed by a financial institution which has the authority to act as a trustee and whose trust operations are subject to federal or state oversight.
  - (vi) An escrow account managed by a bank or other financial institution whose account operations are regulated and examined by a federal or state agency.
- (e) "Beneficiation" means the primary treatment of ore to separate or remove a metallic product or products from ore using a process including, but not limited to, any of the following:
  - (i) Crushing.
  - (ii) Grinding.

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- (iii) Washing.
- (iv) Dissolution.
- (v) Crystallization.
- (vi) Filtration.
- (vii) Sorting.
- (viii) Sizing.
- (ix) Drying.
- (x) Sintering.
- (xi) Pelletizing.
- (xii) Briquetting.
- (xiii) Calcining to remove water and/or carbon dioxide.
- (xiv) Roasting, autoclaving, and/or chlorination in preparation for leaching (except where this process produces a final or intermediate product that does not undergo further beneficiation or processing).
- (xv) Gravity concentration.
- (xvi) Magnetic separation.
- (xvii) Electrostatic separation.
- (xviii) Flotation.
- (xix) Ion exchange.
- (xx) Ex situ solvent extraction.
- (xxi) Electrowinning.
- (xxii) Precipitation.
- (xxiii) Amalgamation.
- (xxiv) Heap, dump, vat, and tank leaching.
- (f) "Contaminated" or "contamination" means having substances in concentrations that are above natural background and that are, or may be, harmful to the environment or to human health and safety as determined by the department under other applicable parts of the act.
- (g) "Cultural, historical, or archaeological resource" means a structure or site that meets any of the following requirements:
  - (i) Is listed as a national historic landmark under the historic sites, buildings, and antiquities act, chapter 593, 49 Stat. 666, 16 U.S.C. 461 to 467 as of the effective date of these rules.
  - (ii) Is listed on the national register of historic places pursuant to the national historic preservation act of 1966, Public Law 89-665, 16 U.S.C. 470 to 470a, 470b, and 470c to 470x-6 as of the effective date of these rules.
  - (iii) Is listed on the state register of historic sites pursuant to 1955 PA 10, MCL 399.151 to 399.152.
  - (iv) Is recognized under a locally established historic district created pursuant to the local historic districts act, 1970 PA 169, MCL 399.201 to 399.215.
- (h) "Cumulative impact" means the environmental impact that results from the proposed mining activities when added to other past, present, and reasonably foreseeable future activities.
- (i) "Designated wellhead protection area" means a specific geographic area which is approved by the



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department as the surface and subsurface area surrounding a water well or well field that supplies a public water system and through which contaminants are reasonably likely to move toward and reach the water well or well field.

(j) "Detroit consumer price index" means the most comprehensive index of consumer prices available for the Detroit area from the United States department of labor, bureau of labor statistics.

(k) "Disposal facility" means a facility or a part of a facility where overburden, waste rock, or tailings are intentionally placed into or on the land and at which the overburden, waste rock, or tailings will remain after closure.

(l) "Earth change" means a humanmade change in the natural cover or topography of land, including cut and fill activities, which may result in or contribute to soil erosion or sedimentation of the waters of the state.

(m) "Final reclamation" means reclamation performed after final cessation of mining with the intent not to resume mining.

(n) "Financial assurance" means an assurance instrument or statement of financial responsibility provided by an operator to ensure compliance with the act, these rules, permit conditions, instructions, or orders of the department.

(o) "Floodplain" means an area of land adjoining a river or stream that will be inundated by a flood with a magnitude that has a 1% chance of occurring or being exceeded in any given year.

(p) "Groundwater" means water below the land surface in a zone of saturation.

(q) "Hazardous substance" means that term as defined in part 201 of the act.

(r) "Indian reservation" means any federally recognized reservation established by treaty, agreement, executive order, or act of congress.

(s) "Indian governing body" means the governing body of any tribe, band, or group of Indians subject to the jurisdiction of the United States and recognized by the United States as possessing power of self-government.

(t) "Interim reclamation" means reclamation performed in connection with temporary cessation of mining with the intent to resume mining.

(u) "Life of the mine" means the period from issuance of a mining permit through the completion of reclamation.

(2) A term defined in the act has the same meaning when used in these rules.

**R 425.103 Definitions; M to Z.**

Rule 103. (1) As used in these rules:

(a) "Mining activity" means any of the following activities for the purpose of, or associated with, mining:

(i) Clearing of land.

(ii) Drilling and blasting.

(iii) Excavation of earth materials to access or remove ore.

(iv) Beneficiation.

(v) Reclamation.

(vi) Transportation of overburden, waste rock, ore, and tailings.

(vii) Storage, relocation, and disposal of overburden, waste rock, ore, and tailings within a mining area, including backfilling of mined areas.

(viii) Storage and transportation of chemical reagents.

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(ix) Construction of water impoundment and drainage features.

(x) Construction of haul roads.

(xi) Construction of utilities or extension of existing utilities.

(xii) Withdrawal, transportation, and discharge of water.

(b) "Nonerosive velocity" means a speed of water movement that is not conducive to the development of accelerated soil erosion.

(c) "Organization report" means a certified statement, on a form prescribed by the department, giving the name, address, and plan of the business organization, and listing the following:

(i) All corporate officers, directors, incorporators, and limited liability company managers.

(ii) All other partners, shareholders, limited liability company members, or other persons who have the authority to make, or are responsible for making, operational decisions, including the construction, operation, closure, postclosure monitoring, reclamation, and remediation of a mine.

(d) "Overburden" means unconsolidated earth material that overlies bedrock and that is or will be excavated by open pit mining methods to access ore.

(e) "Percolation leaching" means a process for the primary purpose of the recovery of metals in an outdoor environment from a stockpile of crushed or excavated ore by percolating water or a solution through the ore and collecting the leachate, and includes the processes known as "heap leaching" and "dump leaching."

(f) "Peripheral rock" means rock that is or will be left in place after the completion of mining and within 3 feet of either of the following:

(i) The walls and floor of an open pit.

(ii) The walls, floor, and roof of adits, portals, and underground mine workings.

(g) "Permanent soil erosion and sedimentation control measures" means control measures that are installed or constructed to control soil erosion and sedimentation and that are designed to remain in place after final reclamation.

(h) "Postclosure" means the period following completion of final reclamation in compliance with the approved reclamation plan.

(i) "Public water supply well" means a well that provides water for a "type I public water supply," "type IIa public water supply," "type IIb public water supply," or "type III public water supply" as those terms are defined in R 325.10502.

(j) "Reactive" means susceptible to reacting, dissolving, or otherwise forming a leachate that is or may be harmful to the environment or to human health and safety as determined by the department under conditions that exist, or may exist, at a mining operation.

(k) "Reclamation" means that reconditioning or rehabilitation of the mining area or portions thereof for useful purposes and the protection of the natural resources, including the control of erosion and the prevention of land or rock slides, collapses and subsidence, and air and water pollution.

(l) "Remediation" means the taking of actions that are necessary to prevent, minimize, or mitigate injury to the public health, safety, or welfare, or to the environment, including cleanup, removal, containment, isolation, destruction, or treatment of a hazardous substance released or threatened to be released into the environment; and associated monitoring and maintenance.

(m) "Stabilization" means the establishment of vegetation or the proper placement, grading, or covering of soil to ensure its resistance to soil erosion, sliding, or other earth movement.

(n) "Storage facility" means a facility or a part of a facility where ore, waste rock, overburden, or tailings is held for a temporary period, at the end of which the ore, waste rock, overburden, or tailings is treated, disposed of, or stored elsewhere.

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- (o) "Surety bond" has the same meaning as "conformance bond" as used in part 632 of the act.
- (p) "Tailings" means material that is separated from the metallic product in the beneficiation or treatment of minerals.
- (q) "Temporary soil erosion and sedimentation control measures" means interim control measures which are installed or constructed to control soil erosion and sedimentation and which are not maintained after project completion.
- (r) "Wetland" means that term as defined in part 303 of the act.
- (2) A term defined in the act has the same meaning when used in these rules.

**PART 2. PERMITS**

**R 425.201 Permits.**

Rule 201. (1) An operator shall not begin mining activities without first obtaining a mining permit from the department. A person requesting a mining permit shall submit all of the following to the department:

- (a) A permit application on forms prescribed by the department, signed by the operator or an authorized representative of the operator.
  - (b) A permit application fee as prescribed in part 632 of the act.
  - (c) An environmental impact assessment.
  - (d) A mining, reclamation, and environmental protection plan.
  - (e) A contingency plan.
  - (f) A description of the type or types and amount of financial assurance to be provided that will satisfy the requirements of R 425.301.
  - (g) A list of all other applicable permits and licenses that are anticipated to be required.
  - (h) An organization report on a form prescribed by the department.
- (2) Beneficiation activities shall require a separate mining permit under 1 or both of the following conditions:
- (a) The site of the proposed beneficiation activities is not within or adjacent to the site of other associated mining activities, either existing or proposed, that are subject to a mining permit.
  - (b) The operator of the proposed beneficiation activities is not the same person as the operator of other associated mining activities, either existing or proposed, that are subject to a mining permit.
- (3) An applicant shall submit to the department 10 paper copies of the documents required under subrule (1), (a) and (c) to (h) of this rule, and shall also submit the documents in an electronic format approved by the department.
- (4) The department shall process an application for a mining permit according to the requirements of section 63205 of the act, as follows:
- (a) Effective 14 days after the department receives an application for a mining permit, the application shall be considered to be administratively complete unless the department proceeds as provided under subdivision (b) of this subrule.
  - (b) If, before the expiration of the 14-day period under subdivision (a) of this subrule, the department notifies the applicant that the application is not administratively complete, specifying the information necessary to make the application administratively complete, or notifies the applicant that the fee required to accompany the application has not been paid, specifying the amount due, the running of the 14-day period under subdivision (a) of this subrule is tolled until the applicant submits to the department the specified information or fee amount due. The notice shall be given in writing or electronically.

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- (c) Within 42 days after an application for a mining permit is determined to be administratively complete, the department shall hold a public meeting on the application. The department shall give notice of the public meeting not less than 14 or more than 28 days before the date of the public meeting. The notice shall specify the time and place of the public meeting, which shall be held in the county where the proposed mining operation is located, and shall include information on how to review or obtain a copy of the application. The department shall make a printed and electronic copy of the application available at a library or other public building in the county where the proposed mining operation is located, and shall post a copy of the application on the department website. The notice shall be given in writing to the city, village, or township and the county where the proposed mining operation is to be located and to all affected federally recognized Indian tribes in this state. The notice shall also be given by publication in a newspaper of local distribution in the area where the proposed mining operation is to be located.
- (d) The department shall accept written public comment on the permit application for 28 days following the public meeting under subdivision (c) of this subrule. Within 28 days after the expiration of the public comment period, the department shall reach a proposed decision to grant or deny a mining permit and shall prepare a document explaining the basis for the decision. The decision shall be based upon the permit application and the statutory requirements under part 632 of the act. The department shall establish a time and place for a public hearing on the proposed decision, and shall give notice of the public hearing not less than 14 or more than 28 days before the date of the public hearing. The notice shall be given in writing to the city, village, or township and the county where the proposed mining operation is to be located and to all affected federally recognized Indian tribes in this state. The notice shall also be given by publication in a newspaper of local distribution in the area where the proposed mining operation is to be located. The notice shall contain all of the following:
  - (i) The time and place of the public hearing.
  - (ii) The name and address of the applicant, the type of mining proposed, and the location and general areal extent of the mining area.
  - (iii) A statement of the department's proposed decision to issue or deny the permit.
  - (iv) Information on how to review a complete copy of the application, the draft permit or denial, and the basis for the proposed decision.
  - (v) A listing of other permits and hearings that are pending or anticipated under this act with respect to the proposed mining operation.
  - (vi) The name, address, and telephone number of a representative of the department who may be contacted to obtain more information on the application.
  - (vii) A description of the process for participating in the public hearing.
- (e) The department shall accept written public comment on the proposed decision to grant or deny a mining permit for 28 days following the public hearing. At the expiration of the public comment period, the department shall issue a report summarizing all comments received and providing the department's response to the comments.
- (f) Within 28 days after the expiration of the public comment period under subdivision (e) of this subrule, the department shall grant or deny the mining permit application in writing. A determination that an application is administratively complete does not preclude the department from requiring additional information from the applicant. The 28-day period under this subdivision shall be tolled until the applicant submits the requested information. If a mining permit is denied, the reasons shall be stated in a written report to the applicant.
- (5) The department may impose terms and conditions in a mining permit, in addition to those specified in the application, that are necessary to implement these rules and part 632 of the act.
- (6) The department shall not issue a mining permit authorizing percolation leaching unless the applicant demonstrates that the proposed percolation leaching meets the requirements of R 425.403.

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(7) Subject to subrule (9) of this rule, the department shall approve a mining permit if it determines both of the following:

- (a) The permit application meets the requirements of part 632 of the act.
- (b) The proposed mining operation will not pollute, impair, or destroy the air, water, or other natural resources or the public trust in those resources, in accordance with part 17 of the act. In making this determination, the department shall consider the extent to which other permit determinations afford protection to natural resources. For this subdivision, excavation and removal of nonferrous metallic minerals and of associated overburden and waste rock, in and of itself, does not constitute pollution, impairment, or destruction of those natural resources.
- (8) The department shall deny a mining permit if it determines the requirements of subrule (7) of this rule have not been met.
- (9) The department shall not issue a mining permit, or approve a transfer of a mining permit, to a person if the department has determined that person to be in violation of part 632 of the act, these rules, a mining permit, or an order of the department under part 632 of the act, unless the person has corrected the violation or the person has entered into a written consent agreement to correct the violation pursuant to a compliance schedule approved by the department. The department may require compliance with the consent agreement as a condition of the mining permit.

**R 425.202 Environmental impact assessment.**

Rule 202. (1) The environmental impact assessment required under R 425.201(1)(c) shall include, but is not limited to, the following:

- (a) For each of the conditions and features listed in subrule (2) of this rule:
  - (i) An identification and description of the condition or feature as it currently exists within the mining area and the affected area.
  - (ii) An identification of the proposed mining activities that may impact the condition or feature, and the process or mechanism through which the impact may occur.
  - (iii) An analysis of the potential impacts of proposed mining activities on the condition or feature and, where applicable, the effects of the condition or feature on the proposed mining activities.
  - (iv) A reference to the measures proposed to be taken under the mining, reclamation, and environmental protection plan to reduce or mitigate the potential impacts, and the predicted effects of those measures. If the measures are not required under part 632 of the act, then the environmental impact assessment shall identify other statutes or regulations, if any, under which the measures may be required.
  - (v) A map or maps and appropriate photographs, with any necessary explanatory documents or notations, showing the affected area for the condition or feature, and a description of the basis for determining the affected area.
- (b) An analysis of the potential cumulative impacts on each of the conditions or features listed in subrule (2) of this rule within the mining area and the affected area from all proposed mining activities and through all processes or mechanisms. The analysis shall consider additive effects, and the assessment of significant interactions between chemical and physical properties of any discharges, with reference to the physical and chemical characteristics of the environment into which the discharge may be released.
- (c) An analysis of feasible and prudent alternatives for the mining activities consistent with the reasonable requirements of the public health, safety, and welfare. The analysis shall include all of the following:
  - (i) A description of feasible and prudent alternatives.
  - (ii) A description of alternatives considered but not carried forward for further evaluation.
  - (iii) A description of why the chosen alternatives are preferred.

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- (d) The name and qualifications of the person or persons who prepared the environmental impact assessment.
- (e) A description of the methodologies applied in preparing the environmental impact assessment, including the following:
  - (i) Quality assurance and quality control as approved by the department.
  - (ii) Information that demonstrates that the methodologies are appropriate and effective, or are widely used and generally accepted.
  - (f) The sources of information used in preparing the environmental impact assessment.
- (2) The requirements of subrule (1)(a) and (b) of this rule apply to natural and humanmade conditions and features including, but not limited to, the following:
  - (a) Topography.
  - (b) Soil series.
  - (c) Geology of the bedrock and unconsolidated materials overlying the bedrock, including areal extent, thickness, lithology, and permeability.
  - (d) Groundwater occurrence that may impact, or be impacted by, mining activities, including the following:
    - (i) Thicknesses of aquifers, hydraulic conductivity, and interconnections between multiple aquifers and between aquifers and surface water.
    - (ii) Depth to groundwater, groundwater recharge areas, groundwater flow direction, hydraulic gradients, groundwater velocity, and 3-dimensional flow paths.
    - (iii) Seasonal variations of the items in paragraph (ii) of this subdivision.
  - (e) Natural or artificial lakes, ponds, impoundments, rivers, streams, creeks, drains, seeps, and springs, including both of the following:
    - (i) Observed levels or discharge rates.
    - (ii) Predicted seasonal and long-term variations of levels or discharge rates.
  - (f) A complete water balance that accounts for precipitation, evapotranspiration, infiltration, runoff, streamflows, and groundwater and surface water withdrawals and discharges from mining activities.
  - (g) Groundwater and surface water quality, including all of the following:
    - (i) Specific conductance as an indication of dissolved solids.
    - (ii) Temperature.
    - (iii) The hydrogen ion concentration expressed as pH.
    - (iv) Dissolved oxygen.
    - (v) Concentrations of all of the following substances:
      - (A) Cations of calcium, sodium, magnesium, potassium, and iron.
      - (B) Anions of chloride, sulfate, and bicarbonate.
    - (C) Other total and dissolved elements and compounds that may be introduced or affected by the mining activities.
  - (vi) Predicted seasonal variations of the parameters listed in paragraphs (i) to (v) of this subdivision.
  - (h) Any known occurrence of groundwater that is contaminated so that a property is a facility as defined by part 201 of the act.
  - (i) All documented private water supply wells.

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- (j) All public water supply wells.
  - (k) Irrigation and disposal wells.
  - (l) Designated wellhead protection areas.
  - (m) Floodplains, Great Lake shorelines, and wetlands.
  - (n) Natural rivers as defined in section 30501 of the act.
  - (o) Wild and scenic rivers as defined in 1968, Public Law 90-542, 82 Stat. 906.
  - (p) Residential dwellings, places of business, places of worship, schools, hospitals, government buildings, or other buildings used for human occupancy all or part of the year.
  - (q) Existing and proposed infrastructure and utilities.
  - (r) Areas actively maintained for public recreation.
  - (s) Natural areas as defined in R 324.35101.
  - (t) State wilderness areas as defined in MCL 324.35101.
  - (u) Federal wilderness areas as defined in 78 Stat. 890, 16 U.S.C. 1131.
  - (v) Wild areas as defined in MCL 324.35101.
  - (w) Research natural areas as defined in CFR Title 36, Section 251.23.
  - (x) Land uses, land access, general size and shape of tracts of land, and current and historic land use trends.
  - (y) Species and abundance of aquatic and terrestrial flora and fauna, and predicted variations in their occurrence based on at least 2 years of relevant information. Relevant information may include records of pertinent data at other sites having documented similar conditions or credible regional studies from acknowledged sources, but shall include at least 1 year of site-specific data.
  - (z) Fish and wildlife habitats.
  - (aa) Threatened species or endangered species as defined in part 365 of the act or in the endangered species act of 1973, Public Law 93-205, 87 Stat. 884.
  - (bb) Species of special concern as designated by the US forest service region 9 regional forester's list of species of special concern.
  - (cc) Non-native or invasive plant and animal species.
  - (dd) Ecological systems as identified in recognized published sources.
  - (ee) Cultural, historical, or archaeological resources.
  - (ff) Air quality.
  - (gg) Meteorology, and predicted seasonal and long-term variations of the meteorology.
  - (hh) Visual resources.
  - (ii) Noise.
  - (jj) Light.
  - (kk) Seismicity.
- (3) For the conditions and features listed in subrule (2)(d), (e), (g), and (gg) of this rule, the required characterization of seasonal or long-term variations in the condition or feature shall be satisfied by a combination of documented observations of pertinent data over a period of at least 2 years at the monitoring site and records of pertinent data at other sites having documented similar conditions or credible regional studies from acknowledged sources. Seasonal and long-term variations at the monitoring site shall

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- be predicted, where feasible, using statistical analysis demonstrating a confidence interval. The statistical analysis shall include an explanation of how the use of any data from other sites affects the confidence interval. Analysis of potential impacts shall incorporate credible extremes in the condition or feature based on the statistical analysis.
- (4) An applicant may describe the types of public input sought, if any, in preparing the environmental impact assessment, and may include the method used to collect public input and a summary of relevant comments.
- (5) Information required by rules promulgated under another part of the act or under other state or federal law and incorporated in the environmental impact assessment shall satisfy the requirements for an environmental impact assessment under these rules to the extent that the information addresses the area and activities as required under part 632 of the act.

**R 425.203 Mining Plan.**

Rule 203. The mining, reclamation, and environmental protection plan required under

R 201(1)(d) shall contain a plan for the proposed mining operations. The plan shall include information that demonstrates that all methods, materials, and techniques proposed to be utilized are capable of accomplishing their stated objectives in protecting the environment and public health, except that such information may not be required for methods, materials, and techniques that are widely used in mining or other industries and are generally accepted as effective. The required information may consist of results of actual testing, modeling, documentation by credible independent testing and certification organizations, or documented applications in similar uses and settings. The plan shall include, at a minimum, all of the following:

- (a) A description of the type and method of mining, the expected operating life of the mine, and the anticipated rate and schedule of mining.
- (b) An estimate of the number of employees required for the mining operation, and variations in the number over the life of the mine.
- (c) Information depicting and describing the items listed in paragraphs (i) to (xxiv) of this subdivision that are mining activities or are part of, or associated with, mining activities. Information that is amenable to clear depiction on a map shall be shown on a map or maps of the mining area drawn to an appropriate scale on a topographic base and referenced to the nearest government-surveyed section or quarter-section lines. Other required information shall be presented, as appropriate, by cross-sections, photographs, documents, and engineering drawings.
- (i) Area, thickness, and characteristics of topsoil that will be stripped, and plans for stockpiling and stabilizing topsoil until it will be used in reclamation.
- (ii) Area, volumes, and characteristics of overburden and waste rock to be excavated; plans and schedules for excavating; and locations and dimensions of stockpiles and final placement areas.
- (iii) Area, volumes, types, and mineralogy of ore to be excavated, and schedule of mining and stockpiling ore.
- (iv) Plans for limiting access to stockpiles and storage or disposal facilities to prevent disposal of unauthorized materials.
- (v) A characterization of the geochemistry of the ore, waste rock, and overburden that will be mined, and peripheral rock that will be exposed in the process of mining, and of any tailings that will be generated. The characterization shall include the following:
  - (A) Chemical and physical testing and modeling to predict the potential generation of acid, dissolved metals, and other related substances by reaction and leaching of the ore, waste rock, tailings, overburden, and peripheral rock.

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- (B) Testing and modeling methodology.
- (C) A plan for monitoring the characterization during the proposed mining operation to calibrate and adjust the model and predictions.
- (D) Identification of the ore, waste rock, overburden, peripheral rock, and tailings that are reactive.
- (vi) Lithology and thickness of rock surrounding and overlying the ore body.
- (vii) The locations, depths, and contours of open pits.
- (viii) The locations and dimensions of shafts, portals, or other openings between the land surface and underground mine workings.
- (ix) The areal extent, depth, and dimensions of underground workings.
- (x) Types and uses of grouting of the walls of open pits and of the walls, floor, and roof of underground workings.
- (xi) A plan for preventing damage to the environment or public health or safety from subsidence, caving, or collapse of underground mine workings. The plan shall contain the following:
- (A) A description of any planned or intentional caving and subsidence.
- (B) Provisions to prevent adverse impacts to public or private water supplies or to an aquifer in the affected area.
- (C) Provisions to assure that any underground mining shall not cause material damage to structures not owned or controlled by the operator.
- (D) Provisions to assure that any underground mining shall not cause material damage to natural features on lands not owned by the operator.
- (xii) A description of water that will be used in the mining operations, including the source or sources of the water and intended rates and durations of pumping, diversion, or withdrawal.
- (xiii) A description of water that will be stored, transferred, or discharged in the mining operations, including:
- (A) The location, size, and capacities of any artificial ponds, impoundments, dewatering systems, diversions, other water control structures, and treatment facilities.
- (B) The estimated volumes, rates, and water quality of discharges, and the discharge locations.
- (xiv) Storage areas for equipment and vehicles.
- (xv) Buildings and other facilities or structures.
- (xvi) Areas for the storage and transfer of chemicals, fuel, and explosives.
- (xvii) Truck and mining equipment wash down areas.
- (xviii) Roads, railroads, docks, piers, and other transportation infrastructure, and provisions to prevent release of contaminants to the environment from ore or waste rock during transportation.
- (xix) Beneficiation processes, materials, and activities, including the following:
- (A) The types, extent, and sequence of beneficiation, including physical and chemical characterization of all materials, wastes, or products.
- (B) A description of any mills, concentrators, dryers, separators, chemical reactors, filtering equipment, electrolytic chambers, flotation cells, kilns, or other beneficiation equipment.
- (C) The type and amount of chemicals to be added.
- (D) The types, amounts, locations, sequence, schedule, and means of waste rock and tailings disposal.

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- (E) Provisions to prevent release of contaminants to the environment from beneficiation equipment.
- (F) Tailings transport systems, if not buried, should be designed to provide for emergency tailings conveyance or storage should a pipeline break, plug, freeze or require repairs and be made accessible for inspection, emergency repair, and maintenance. Location of emergency spill areas shall be designed to prevent contamination of surface water. If a power failure occurs, then tailing pipelines shall be self draining to the tailings area or to an emergency spill area or standby pumps and pipelines or standby power shall be provided. In some cases (such as a long pipeline over rough country), several spill areas may have to be provided.
- (xx) Plans and schedules for regulating or controlling drainage of water, including surface runoff, from within the diked area of a tailings disposal area to prevent breaching of the dikes, both during and after mining. The plans and schedules shall ensure that 24-hour 100-year precipitation events do not cause releases of water that are not in compliance with the conditions of the mining permit.
- (xxi) Plans and schedules for monitoring, containment, and treatment of surface runoff that has contacted, or may contact, ore, waste rock, overburden, or tailings determined to be reactive under R 425.203(c)(v). The plans shall be designed to reasonably minimize actual and potential adverse impacts on groundwater and surface water by preventing leaching or runoff of acid-forming waste products and other waste products from the mining process.
- (xxii) A soil erosion and sedimentation control plan that meets the standards of part 91 of the act to effectively reduce accelerated soil erosion and sedimentation that may impact the affected area. The plan shall include, but not be limited to, all of the following:
- (A) The location, description, and schedule for installing and removing all proposed temporary soil erosion and sediment control measures.
- (B) A description and the location of all proposed permanent soil erosion and sediment control measures, and provisions for establishing the permanent soil erosion control measures as soon as possible after an earth change has been completed or if significant earth change activity ceases.
- (C) Provisions to limit the exposed area of any disturbed land to the shortest feasible period of time.
- (D) Provisions to remove sediment caused by accelerated soil erosion from runoff water before it leaves the mining area.
- (E) Temporary or permanent control measures for the conveyance of water around, through, or from the area affected by mining activities to limit the water flow to a nonerosive velocity.
- (F) Provisions for temporary soil erosion and sedimentation control measures before or upon commencement of the earth change activity; for maintaining the measures on a daily basis; and for removing the measures after permanent soil erosion measures are in place and the area is stabilized.
- (G) Provisions for stabilizing the area with permanent soil erosion control measures as soon as possible after an earth change has been completed or if significant earth change activity ceases.
- (xxiii) Plans for conducting reclamation activities concurrently with mining operations to the extent feasible.
- (xxiv) Plans for inspecting, monitoring, and maintaining liners, final covers, leachate collection systems, leak detection systems, berms, and embankments, including frequency of inspections. Inspecting or monitoring shall be conducted at least monthly.
- (d) A map and description of ownership of all tracts of land in the mining area and within 1320 feet of the boundary of the mining area, including all of the following:
- (i) Ownership of surface rights.
- (ii) Ownership of mineral rights.
- (iii) Conservation easements as defined in section 2140 of the act.



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- (iv) Historic preservation easements as defined in section 2140 of the act.
- (e) A description of measures to be taken to prevent damage to property not owned or controlled by the operator within and immediately adjacent to the mining area.
- (f) Measures to minimize impacts to the volumes and rates of recharge, flow, and discharge of groundwater and surface waters in the mining area and in the affected area sufficient to accommodate seasonal and long-term variations in precipitation, water quantity, and water quality.
- (g) A monitoring plan for monitoring of groundwater and surface water quality, groundwater levels, and surface water stage and discharge rates, during mining operations and during the post-closure monitoring period. The monitoring plan shall conform to existing statutes and rules, but is not required to include monitoring required under other permits.
- (i) The monitoring plan shall provide for monitor wells and structures to be located at points where mining activities have a reasonable potential for measurable impact on surface water or groundwater, taking into consideration the following:
  - (A) Proximity to the mining activity.
  - (B) The potential for diffusion and dispersion.
  - (C) Horizontal and vertical groundwater gradients.
  - (D) Seasonal variations in flow.
  - (E) Topography, access, and other practical limitations.
- (ii) The monitoring plan shall comply with the requirements of R 425.406.
- (iii) The monitoring plan shall include all of the following:
  - (A) Number and location of monitoring wells and structures.
  - (B) Frequency of sampling and sampling procedure, including all of the following:
    - (aa) The sampling method and volume of water to be removed from each well or sampling point during sampling.
    - (bb) Steps taken to prevent cross contamination between samples.
    - (cc) Sample handling and preservation methods.
    - (dd) Laboratory analysis method.
    - (ee) Laboratory method detection level.
    - (ff) Quality assurance and quality control as approved by the department.
    - (gg) Provisions for routine monitoring to be conducted at least every 3 months.
  - (C) Sampling parameters, which shall include the following:
    - (aa) Specific conductance.
    - (bb) Temperature.
    - (cc) The hydrogen ion concentration expressed as pH.
    - (dd) Dissolved oxygen.
    - (ee) Concentrations of calcium, sodium, magnesium, potassium, and iron.
    - (ff) Concentrations of chloride, sulfate, and bicarbonate.
    - (gg) Concentrations of other total and dissolved elements and compounds that may be introduced or affected by the mining activities, as identified in the environmental impact assessment.

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- (D) A description of the techniques used to present and evaluate water quality monitoring data.
- (E) A description of the method used to collect static water levels and present groundwater flow data. Static water level precision shall be to 0.01 foot.
- (F) The depth and screened interval for each monitor well.
- (G) Provisions for design, construction, and abandonment of monitoring wells and structures that comply with R 425.406(2).
- (h) A treatment and containment plan that describes proposed measures to prevent contamination of groundwater and surface water from leaching of acidic water or dissolved metals.
- (i) The treatment and containment plan required under this subdivision shall apply to earth materials that are determined to be reactive under R 425.203(c)(v). The plan shall describe proposed measures for the following:
  - (A) Design, construction, and operation of stockpiles and storage or disposal facilities for ore, waste rock, overburden, and tailings.
  - (B) The management of peripheral rock that has been determined in the environmental impact assessment to have the potential to contaminate groundwater or surface water.
  - (ii) The treatment and containment plan required under this subdivision shall account for the volume, rate, and movement of leachate that may be generated, and the influence of weather on the generation of leachate, including any adverse impacts from severe or extreme weather events.
  - (iii) The treatment and containment plan required under this subdivision shall meet all applicable requirements of R 425.409.
- (i) A general description of blasting materials and methods.
- (j) If a threatened or endangered species may be impacted, a plan to protect the threatened or endangered species that conforms to the requirements of state and federal endangered species laws.
- (k) Plans to monitor, prevent, minimize, and mitigate any adverse impacts of the proposed mining operation on flora, fauna, fish or wildlife habitats, and biodiversity.
- (l) Where percolation leaching is proposed as a mining activity, plans demonstrating compliance with R 425.403.
- (m) A plan and schedule for inspection or monitoring, or both, of all mine related facilities at least monthly.
- (n) The name and qualifications of the person or persons who prepared the plan for the proposed mining operations.

**R 425.204 Reclamation Plan.**

Rule 204. The mining, reclamation, and environmental protection plan required under R 425.201(1)(d) shall contain a plan for the proposed final reclamation operations, including the anticipated schedule, sequence, and duration of reclamation. The plan shall include information that demonstrates that all methods, materials, and techniques proposed to be used are capable of accomplishing their stated objectives in protecting the environment and public health, except that such information may not be required for methods, materials, and techniques that are widely used in mining or other industries and are generally accepted as effective. The required information may consist of results of actual testing, modeling, documentation by credible independent testing and certification organizations, or documented applications in similar uses and settings. The plan shall include, at a minimum, all of the following:

- (a) Information depicting and describing the items listed in paragraphs (i) to (iv) of this subdivision. Information that is amenable to clear depiction on a map shall be shown on a map or maps of the mining area drawn to an appropriate scale on a topographic base and referenced to the nearest government-



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surveyed section or quarter-section lines. Other required information shall be presented, as appropriate, by cross-sections, documents, and engineering drawings.

(i) Final land contours.

(ii) Proposed final land use and relationship to surrounding land and land use.

(iii) Ponds, streams, wetlands, roads, dikes, drainage ditches, and soil erosion and sedimentation control structures that will remain after completion of reclamation.

(iv) Plans and schedules for stabilizing waste rock piles, settling ponds, tailings disposal facilities, overburden banks, open pit banks and walls, roads, and the plant site. The plans shall include sloping, grading, terracing, and revegetating that will prevent slumping, land or rock slides, or other slope failure and will effectively reduce accelerated soil erosion and sedimentation. The plans shall include the following:

(A) Provisions for sloping or terracing of the banks or bottoms of open pit surfaces that will be under water after cessation of mining, or other measures to prevent a hazard to public safety.

(B) Provisions for replacing topsoil from surface areas disturbed by the mining operation as appropriate for the approved final land use.

(C) Vegetation species and quantities, seedbed and planting area preparation, seeding and planting methods, mulching, fertilization, maintenance, and final density of plants.

(b) Evidence satisfactory to the department that the proposed reclamation will conform to the following minimum performance standards:

(i) Final disposition of all toxic and hazardous wastes, refuse, tailings and other solid waste shall be managed in a manner that protects the environment, natural resources and public health and safety, and in conformance with all other applicable federal and state laws and regulations.

(ii) All shafts, portals, or other openings between the land surface and underground mine workings shall be sealed in a manner that will protect the environment, natural resources, and public health and safety and in accordance with all other applicable laws and regulations.

(iii) All surface structures, infrastructure, rock stockpiles, and tailings disposal areas constructed as a part of the mining activities shall be removed, unless they are converted to an alternate use in accordance with the proposed final land use.

(iv) All disturbed surface areas shall be stabilized to prevent accelerated erosion by wind or water.

(v) All disturbed surface areas shall be revegetated with a variety of plants that are native to the area, except that non-native plants may be used for revegetation in areas where appropriate for an approved final land use that is different from the premining land use. In addition, plant species not native to the area may be used as approved by the department when necessary to provide temporary stabilization of slopes and prevention of erosion.

(vi) Both the mining area and the affected area shall be reclaimed to achieve a self-sustaining ecosystem appropriate for the region that does not require perpetual care following closure and with the goal that the affected area shall be returned to the ecological conditions that approximate premining conditions subject to changes caused by nonmining activities or other natural events. Any portion of the mining area owned by the applicant may be used for any legal purpose.

(c) Plans for monitoring of ground and surface water quality during the postclosure monitoring period.

(d) The name and qualifications of the person or persons who prepared the plan for the proposed final reclamation operations.

**R 425.205 Contingency plan.**

Rule 205. (1) The contingency plan required under R 425.201(1)(e) shall include at a minimum all of the

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following:

(a) An assessment of the risk to the environment or public health and safety associated with potential accidents or failures involving the following, and the response measures that shall be followed in each case:

(i) Release or threat of release of toxic or acid-forming materials.

(ii) Storage, transportation, and handling of explosives.

(iii) Fuel storage and distribution.

(iv) Fires.

(v) Wastewater collection and treatment system.

(vi) Settling pond or tailings disposal area embankment failure.

(vii) Air emissions.

(viii) Spills of hazardous substances.

(ix) Other specific natural risks defined by the environmental impact assessment.

(x) Power disruption.

(xi) Unplanned subsidence.

(xii) Leaks from containment systems for stockpiles or storage or disposal facilities.

(b) A section that contains all of the following information:

(i) The procedure for notifying the general public, public authorities, and safety agencies in the event of an emergency.

(ii) A list, by title, of personnel to be contacted and their duties and responsibilities.

(iii) The actions to be taken to restrict access of nonessential personnel to the area.

(iv) If evacuation of the public is necessary, then the procedure for conducting the evacuation.

(v) A list of emergency equipment and its location.

(c) A list of emergency telephone numbers, including the following:

(i) Representatives of the operator.

(ii) The emergency management coordinator.

(iii) Local ambulance services.

(iv) Local hospitals.

(v) Local fire and police departments.

(vi) The department of environmental quality.

(vii) The pollution emergency alerting system.

(viii) Federal regulatory agencies as appropriate.

(ix) The department of natural resources.

(x) The local unit of government.

(d) A plan for testing the contingency plan to assure its effectiveness.

(2) The applicant shall submit a copy of the contingency plan to each emergency management coordinator having jurisdiction over the affected area at the time the application is submitted to the department.

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**R 425.206 Amendment of permits.**

Rule 206. (1) A mining permit may be amended at any time to address changes in the mining operation, natural or humanmade conditions, or technology, or to correct an oversight. An application for amendment of a mining permit shall be submitted on a form prescribed by the department, signed by the permittee or an authorized representative of the permittee. The application shall include revisions of any of the following that are affected by the changes:

- (a) The environmental impact assessment.
  - (b) The mining, reclamation, and environmental protection plan.
  - (c) The contingency plan.
  - (d) Federal, state, and local permits and licenses that are anticipated to be required.
  - (e) Provisions for financial assurance required under R 425.301.
  - (f) Other terms and conditions of the mining permit.
- (2) A permittee may submit a request to the department to amend a mining permit.
- (3) The department may require a permittee to submit an application for amendment of a mining permit if the department determines that the terms and conditions of the mining permit are not providing the intended reasonable protection of the environment, natural resources, or public health and safety.
- (4) Within 30 days after receiving a request to amend a mining permit, the department shall determine whether the request constitutes a significant change from the conditions of the approved mining permit. If the department determines that the request is a significant change, then the department shall submit the request for amendment to the same review process as provided for a new permit application in R 425.201(4).

**R 425.207 Transfer of permit.**

Rule 207. (1) If a permittee desires to transfer the mining permit to another person, then the acquiring person shall submit to the department a request for the transfer of the permit. The request for transfer of the permit shall be submitted on forms prescribed by the department, and shall be signed by an authorized representative of the permittee and an authorized representative of the acquiring operator. The request shall include the following:

- (a) An update of the contingency plan.
  - (b) Provisions for financial assurance as prescribed in R 425.301.
  - (c) An organization report for the acquiring operator.
- (2) Upon receiving a request for a transfer of a mining permit, the department shall inspect the mining area and determine whether the existing permittee is in violation of part 632 of the act or these rules at the mining site. If the department determines the permittee to be in violation, then the mining permit shall not be transferred to a person until the permittee has completed the necessary corrective actions or the person acquiring the mining permit has entered into a written consent agreement to correct all of the violations. The department may incorporate the consent agreement by reference in the mining permit.
- (3) A permit transfer is not effective until all other applicable permits are transferred to the acquiring operator. Until the department approves the transfer of a mining permit, the acquiring operator shall not operate the mine. Upon approval of a transfer request, the acquiring operator shall assume the responsibilities for mining activities specified in part 632 of the act, these rules, a mining permit, or orders of the department under part 632 of the act.
- (4) If a permittee conveys his or her authority to operate a mine to another person, and a request for transfer of the mining permit has not been approved, then, in addition to other enforcement actions, the department may order the immediate suspension of any or all mining activities at the permitted site,

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including the removal or sale of metallic product.

**PART 3. FINANCIAL ASSURANCE**

**R 425.301 Financial assurance; requirements.**

Rule 301. (1) A mining permit shall not be effective until the permittee establishes financial assurance in an amount in accordance with the mining permit as issued and in compliance with this rule. A permittee shall thereafter maintain financial assurance that is approved by the department during mining operations and during the postclosure monitoring period, until the department releases the permittee from its obligation to maintain financial assurance upon termination of the mining permit or upon transfer of the mining permit to another operator. Failure of a permittee to maintain financial assurance after the effective date of a mining permit as required by this subrule constitutes a violation of the mining permit and is grounds for the department to order immediate suspension of any or all mining activities, including the removal of metallic product from the site, pursuant to section 63221 of the act.

(2) The financial assurance shall apply to all mining and reclamation operations subject to the mining permit and shall be sufficient to cover the cost to administer, and to hire a third party to implement the reclamation, remediation, and postclosure monitoring required under part 632 of the act, these rules, a mining permit, or orders of the department under part 632 of the act, including the costs to remediate any contamination of the air, surface water, or groundwater that is in violation of the mining permit. The amount of financial assurance shall be determined as follows:

- (a) The operator shall provide an itemized list of reclamation, remediation, and postclosure monitoring activities and costs associated with all of the following:
  - (i) Mining activities subject to the mining permit where reclamation has not yet been completed.
  - (ii) Mining activities that are anticipated to occur under the mining permit.
- (b) The department may require financial assurance in an amount larger than calculated by the operator under subdivision (a) of this subrule based upon an analysis of the projected costs under subdivision (c) of this subrule by the department.
- (c) The cost estimate required under this subrule shall be based on equipment, materials, and methods normally available to a third party contractor using current handbooks, publications, or other documented costs acceptable to the department. The cost estimate shall include at a minimum the costs for the following:
  - (i) Reclamation.
  - (ii) Remediation of any contamination of the air, surface water, or groundwater that is in violation of the mining permit.
  - (iii) Administrative oversight.
  - (iv) Reasonable contingencies.
  - (v) Other necessary environmental protection measures.
- (d) The amount of an assurance instrument shall include any possible fees assessed by the issuing institution for accessing the instrument.
- (3) The financial assurance required under this rule shall consist of an assurance instrument or combination of instruments covering at least 75% of the total required amount. Financial assurance for the balance of the required amount, if any, shall consist of a statement of financial responsibility. When determining the portion of the financial assurance required under this rule that may be satisfied by a statement of financial responsibility, the department shall consider the following:
  - (a) The ability of the operator to pay for potential remediation costs in the case of a violation of this part, as demonstrated by the information in the statement of financial responsibility.

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(b) Whether the operator carries pollution prevention or environmental liability insurance, and if so, the amount of the insurance.

(c) Whether the operator has received a recognized third-party certification of an environmental management system for mining operations.

**R 425.302 Assurance instruments.**

Rule 302. (1) An assurance instrument shall consist of any of the following:

(a) A trust fund or escrow account as described in R 425.303.

(b) A surety bond as described in R 425.304.

(c) An irrevocable letter of credit as described in R 425.305.

(d) A certificate of deposit or time deposit account as described in R 425.306.

(e) Other equivalent financial instruments approved by the department.

(2) All assurance instruments shall be issued or maintained by entities that are not affiliated with the operator and shall not be invested in the activities regulated under this permit.

(3) Assurance instruments shall include a provision requiring the issuing institution to give prompt notice to the department and permittee of any action alleging bankruptcy or insolvency of the issuing institution or a violation that would result in suspension or revocation of the license of the issuing institution.

(4) The operator shall be responsible for all administrative costs involved in establishing and maintaining assurance instruments.

(5) An assurance instrument shall be payable to the state of Michigan.

(6) The permittee shall execute an agreement with the department that stipulates that the department may draw upon the assurance instrument under the conditions described in subrules (13) and (15) of this rule. The agreement shall be executed on a form approved by the department.

(7) The assurance instrument required by this rule may be satisfied in whole or in part by assurance instruments required by other parts of the act if those instruments address the remediation activities required under part 632 of the act.

(8) The operator may submit a written request to the department to adjust the amount of an assurance instrument provided the total value of all assurance instruments equals or exceeds the amount required under the mining permit. If the request meets the requirements of these rules, then the department shall within 60 days after receiving the request approve the adjustment.

(9) A permittee may replace an existing assurance instrument with another approved assurance instrument or instruments that provides equivalent coverage, subject to approval by the department.

(10) A financial institution shall not cancel, terminate, or suspend an assurance instrument without first giving the permittee and the department notice at least 90 days before the effective date of the cancellation, termination, or suspension. Such cancellation, termination, or suspension shall not affect any liability that shall have accrued under the assurance instrument before the effective date of cancellation, termination, or suspension unless the permittee provides a replacement assurance instrument approved by the department or unless the department shall otherwise release the assurance instrument.

(11) A permittee is without the required financial assurance if filing of bankruptcy of the trustee or issuing institution, a suspension or revocation of the authority of the trustee institution to act as trustee, or a suspension or revocation of the authority of the institution issuing an assurance instrument to issue such instruments.

(12) A permittee shall provide an alternative assurance instrument or instruments under the following conditions:

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(a) At least 30 days before the effective date of cancellation, termination, or suspension of an assurance instrument by the permittee or financial institution.

(b) Within 30 days of the date the permittee becomes aware that a financial institution has become ineligible to provide or guarantee an assurance instrument due to bankruptcy or insolvency of the issuing institution or a violation that would result in suspension or revocation of the license of the issuing institution.

(13) If a permittee fails to provide an alternative assurance instrument when required under subrule (12) of this rule, the department may do the following:

(a) Immediately draw upon the assurance instrument or instruments.

(b) Order the immediate suspension of any or all mining activities at the permitted site, including the removal of metallic product from the site, pursuant to section 63211(5) of the act. The permittee shall not resume the suspended mining activities until the department has determined that an acceptable replacement assurance instrument or instruments have been provided.

(14) If the department draws upon an assurance instrument or instruments under subrule (13) of this rule, and the permittee subsequently provides an alternative assurance instrument or instruments approved by the department, then the department shall refund to the issuing financial institution or the permittee the forfeited funds, less any costs associated with the forfeiture.

(15) The department may draw upon an assurance instrument to undertake action necessary to curtail or remediate any damage to the environment or public health under subrule (16) of this rule or to recover costs the department has incurred.

(16) The department shall expend money from assurance instruments only for the recovery of costs described in R 425.301(2).

(a) If the department takes action necessary to curtail and remediate any damage to the environment or public health under Sec. 63221(5) of the act, then the department shall file a claim for recovery of costs with the permittee. If the permittee fails to fully reimburse the department for the costs of such actions within 60 days after filing of the claim, then the department may recover its unreimbursed costs from the assurance instrument or instruments.

(b) For any part of the department's costs not recovered from the permittee or the assurance instrument or instruments, the attorney general, acting for and on behalf of the department, may bring suit for the payment of the claim against the permittee and the financial institutions that executed an assurance instrument or instruments; provided, the liability of any financial institution for costs under the claim shall not exceed the value of the financial instrument or instruments provided by the institution under the provisions for financial assurance under these rules.

(17) A permittee shall notify the department, by certified mail, of the commencement of a voluntary or involuntary proceeding under the bankruptcy provisions of Public Law 95-598, 11 U.S.C. Section 1 to 151302, naming the permittee as debtor, within 10 days after commencement of the proceeding.

**R 425.303 Trust fund or escrow account.**

Rule 303. (1) Subject to R 425.301, an operator may satisfy all or a portion of the financial assurance requirements by establishing a trust fund that conforms to the requirements of this rule. The trustee shall be a bank or other financial institution that has the authority to act as a trustee and whose trust operations are subject to federal or state oversight. The trust agreement shall be executed on a form approved by the department and shall designate the department as the sole beneficiary.

(2) Subject to R 425.301, an operator may satisfy all or a portion of the financial assurance requirements by establishing an escrow account that conforms to the requirements of this rule. The escrow account shall be maintained by a bank or other financial institution whose account operations are subject to federal or state oversight.

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(3) Investments of the trust fund shall be reviewed and approved by the department and may include the following fixed income investments:

- (a) U.S. treasury obligations.
- (b) State issued securities.
- (c) Time deposits.
- (d) Other investments of similar risk as approved by the department.

**R 425.304 Surety bond.**

Rule 304. (1) Subject to R 425.301, an operator may satisfy all or a portion of the financial assurance requirements by obtaining a surety bond that is executed on a form approved by the department and that conforms to the requirements of this rule. The surety company issuing the surety bond shall, at a minimum, be among those listed as acceptable sureties on federal bonds in circular 570 of the United States department of the treasury.

(2) The surety company shall not be liable for deficiencies in the performance of reclamation, remediation, and postclosure monitoring, by the permittee after the department releases the surety bond or releases the permittee from the requirements of part 632 of the act.

**R 425.305 Irrevocable letter of credit.**

Rule 305. (1) Subject to R 425.301, an operator may satisfy all or a portion of the financial assurance requirements by obtaining an irrevocable letter of credit that conforms to the requirements of this rule and is executed on a form approved by the department. The issuing institution shall be a bank or financial institution which has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a federal or state agency.

(2) The letter of credit shall include all of the following information:

- (a) The name of the operator.
- (b) The name and address of the mine.
- (c) The amount of funds assured for reclamation, remediation, and postclosure monitoring by the letter of credit.
- (3) The letter of credit shall be issued for a period of at least 1 year and shall be irrevocable during its term. The letter of credit shall be automatically extended for additional terms of 1 year from the current or each future expiration date unless the issuing institution provides the permittee and the department, at least 60 days before the current expiration date, written notice by certified mail that the issuing institution elects to terminate the letter of credit at the end of its then current term.
- (4) The irrevocable letter of credit shall not be for an amount in excess of 10 percent of the bank's capital surplus account as shown on a balance sheet certified by a certified public accountant.
- (5) The issuing institution shall notify the department immediately if the issuing institution becomes ineligible to issue a letter of credit.

**R 425.306 Certificate of deposit or time deposit account.**

Rule 306. (1) Subject to R 425.301, an operator may satisfy all or a portion of the financial assurance requirements by placing funds in an insured, non-negotiable certificate of deposit or time deposit account held by a bank or other financial institution regulated and examined by a federal or state agency. The value of the certificate of deposit or time deposit account shall be insured by an agency of the United States government, unless otherwise approved by the department.

(2) The certificate or account shall be in the sole name of the director of the department.

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**R 425.307 Statement of financial responsibility.**

Rule 307. (1) The statement of financial responsibility under R 425.301(3) shall consist of the following:

(a) A written statement signed by the operator's chief financial officer that lists data that show that the operator meets the criteria specified in subrule (2) of this rule, and states that the data are derived from an independently audited year-end financial statement.

(b) An independent certified public accountant's report on examination of the operator's financial statement for the latest completed fiscal year stating that the accountant has compared the data listed in the statement provided under subdivision (a) of this subrule with the amounts in the corresponding year-end financial statement and that the accountant asserts the operator's statement of financial responsibility meets the criteria of subrule (2) of this rule and nothing came to the attention of the accountant that caused the accountant to believe that the financial statements should be adjusted.

(2) The statement of financial responsibility under R 425.301(3) shall meet all of the following criteria:

(a) The operator must satisfy 1 of the following 3 conditions:

(i) A current rating for its senior unsecured debt of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's.

(ii) A ratio of total liabilities to tangible net worth less than 1.5.

(iii) A ratio of the sum of net income plus depreciation, depletion and amortization, minus \$10 million, to total liabilities greater than 0.10.

(b) The operator shall have a tangible net worth not less than 25% of the financial assurance required under R 425.301 plus \$10 million.

(c) The operator shall have total assets located in North America of not less than 25% of the sum of the financial assurance required under R 425.301 plus the financial assurance requirements of other parts of the act and equivalent or substantially equivalent federal or state regulations. Declared mineral reserves, except for mineral reserves at the permitted site, may be utilized in determining current assets only to the extent that the value of the reserves exceeds the projected costs of development and production.

(3) For determining qualifications for use of a statement of financial responsibility, liabilities as determined under subrule (2) of this rule shall include responsibilities of the operator for reclamation or remediation, or both, at other mining operations owned or operated by the operator.

(4) Within 90 days after the end of each fiscal year after the effective date of a mining permit, a permittee who utilizes a statement of financial responsibility to satisfy the requirements of this rule shall submit to the department documents described in subrule (1) of this rule for the fiscal year just completed.

(5) If a corporate parent or affiliate of the operator meets the requirements of subrules (1) and (2) of this rule, then the operator may use its parent or affiliate to provide the financial assurance allowed under this rule. The department shall not approve an operator's use of a corporate parent or affiliate as acceptable financial assurance under this rule unless the parent or affiliate also provides the department with a guarantee of the amount sought to be assured through the statement of financial responsibility. The guarantee shall be in a form acceptable to the department.

(6) If the permittee has reasonable knowledge at any time before the year-end review under subrule (4) of this rule that it ceases to meet the requirements of subrule (2) of this rule, then the permittee shall within 10 days notify the department.

(7) The permittee shall provide alternate financial assurance within 60 days after the date on which the permittee finds, under subrule (4), (5), or (6) of this rule, that it no longer meets the requirements of subrule (2) of this rule.

(8) The department may, based on a reasonable belief that a permittee no longer meets the requirements of subrule (2) of this rule, require reports of financial condition at any time from the permittee in addition

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to the information required by subrule (2) of this rule. If the department finds, on the basis of a review of such reports or other information, that the permittee no longer meets the requirements of subrule (2) of this rule, then the department shall notify and inform the permittee in writing. Within 30 days of the notification, the permittee shall provide alternate financial assurance as specified in part 632 of the act.

(9) Failure of a permittee to comply with the requirements of subrule (4) to (8) of this rule shall be cause for the department to order the immediate suspension of any or all mining activities at the permitted site, including the removal of metallic product, pursuant to section 63211(5) of the act. The permittee shall not resume mining operations until the department has determined that an acceptable replacement assurance instrument or instruments have been provided.

**R 425.308 Financial assurance; update.**

Rule 308. (1) A permittee shall update the calculation of the cost to administer, and to hire a third party to implement, the reclamation, remediation, and postclosure monitoring required under R 425.301(2) every 3 years or as the department determines to be necessary. The update shall include the following:

(a) A description of the reclamation and postclosure monitoring completed since the last update.

(b) An estimate of the cost to administer, and to hire a third party to implement, reclamation under the mining, reclamation, and environmental protection plan that has not been completed, as well as necessary environmental protection measures, including remediation of any contamination of the air, surface water, or groundwater that is in violation of the mining permit.

(c) The effects of inflation on the costs of reclamation and postclosure monitoring.

(2) A permittee shall update an assurance instrument required under R 425.301 in accordance with 1 of the following schedules:

(a) If the amount of the assurance instrument equals or exceeds the cost to administer, and to hire a third party to implement, the reclamation, remediation, and postclosure monitoring as originally calculated, multiplied by the Detroit consumer price index as of January 1 of each year, then the permittee shall update the assurance instrument every 3 years by April 1 of the succeeding year.

(b) If the amount of the assurance instrument does not equal or exceed the cost to administer, and to hire a third party to implement, the reclamation, remediation, and postclosure monitoring as originally calculated, multiplied by the Detroit consumer price index as of January 1 of each year, then the permittee shall update the assurance instrument by April 1 of the succeeding year.

(3) The department shall provide notice of an adjustment of the financial assurance to any interested person who has requested notice.

**R 425.309 Final release of financial assurance.**

Rule 309. (1) A permittee may file an application with the department for final release of financial assurance upon termination of the permit.

(a) Within 30 days after receipt of an application for termination of financial assurance, the department shall reach a proposed decision to grant or deny the application based on inspection and review to determine compliance with requirements for termination of the permit, and shall provide notice of the proposed decision to any interested person who has requested notice.

(b) The department shall grant or deny an application for termination of financial assurance not less than 30 days or more than 45 days after providing the notice required under subdivision (a) of this subrule.

(c) If the department grants the application, the department shall within 30 days release cash to the permittee or securities to the institution that provided the assurance instrument.

(d) If the department denies the application, then the department shall notify the permittee in writing, stating the reasons for denial and recommending corrective actions necessary to secure the termination.

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(2) The department shall approve termination of all assurance instruments for a permittee of record upon the effective date of transfer of the permit to a new operator.

**PART 4. MINING OPERATIONS**

**R 425.401 Notice of commencement of mining.**

Rule 401. (1) A permittee proposing to begin mining shall submit written notice to the department of the date mining will commence at least 30 days before commencing new mining activities.

(2) A permittee who has ceased all mining activities for a period of 90 days or more shall submit written notice to the department of the date mining activities will resume at least 30 days before resumption of mining activities.

**R 425.402 Safety measures.**

Rule 402. If hazards to life or property, or both, exist within a mining area, then the permittee shall post safety signs in conspicuous places around the site of the hazard. The permittee shall utilize fencing, gates, or other measures to safeguard the public from unauthorized entry into shafts, adits, portals, or other openings between the land surface and underground workings. The department may require the installation of fences, gates, or other safety measures not inconsistent with other laws or regulations.

**R 425.403 Percolation leaching; requirements.**

Rule 403. A person shall not conduct percolation leaching as a nonferrous metallic mining activity until such time as this rule is amended to establish standards and criteria for percolation leaching.

**R 425.404 Commencement of reclamation.**

Rule 404. (1) If a permittee has ceased all mining and beneficiation for a continuous period exceeding 90 days, the permittee shall notify the department and shall take actions to maintain, monitor, and secure the mining area and shall conduct any interim sloping or stabilizing of surfaces necessary to protect the environment, natural resources, or public health and safety in accordance with the mining permit.

(2) A permittee shall begin final reclamation of a mining area within 3 years of the date of cessation of mining and beneficiation unless the department has granted an extension of time to begin final reclamation.

(3) A permittee shall complete reclamation of a mining area within the time in the approved mining, reclamation, and environmental protection plan unless the department has granted an extension of time under subrule (4) of this rule to complete final reclamation.

(4) A permittee may submit a written request to the department for an extension of time to begin or complete final reclamation. The department shall grant the request if the permittee shows good cause for the extension and the department determines the extension will not cause a threat of damage to the environment, natural resources, or public health and safety. If the reason for the request for extension is economics of the mining operation, then the permittee shall provide justification in the form of projections of metal prices, pending technological improvements, or other reasons demonstrating a likelihood that the mine may become economic at a future time. The term of an extension shall not be more than 12 months. The department may grant additional extensions subject to the provisions of this rule. When approving extensions, the department may require the permittee to conduct interim reclamation activities and monitoring that the department finds necessary to implement the purposes of the act.

(5) A permittee shall, to the extent feasible, conduct reclamation activities concurrently with the mining operation, and in any event shall initiate reclamation activities at the earliest possible time after cessation of mining activities in any portion of the mining area.

**R 425.405 Notice and approval of completed reclamation.**

Rule 405. (1) A permittee shall submit written notice to the department upon completion of reclamation



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work on the mining area or portions thereof.

(2) The department shall proceed promptly to make its determination as to the approval of the reclamation work and shall notify the permittee in writing of either the approval of the work or all reasons for disapproval.

(3) Approval of vegetative cover shall not be granted until the planting has survived at least 2 growing seasons with reasonable assurances of being self-sustaining.

**R 425.406 Protection of water.**

Rule 406. (1) A permittee shall conduct groundwater and surface water monitoring according to the approved monitoring plan as described in R 425.203(g) during mining operations and during the postclosure monitoring period.

(2) An operator shall design, construct, and abandon a monitoring well as prescribed in R 323.2223(4).

(3) Water monitoring shall include the collection of water quality samples from groundwater and surface water, groundwater levels, and surface water levels and discharge rates. The design of the water monitoring systems shall be based on all of the following:

(a) The environmental impact assessment.

(b) The local geology and hydrology.

(c) Groundwater and surface water conditions specific to each activity.

(4) Surface water monitoring sites shall be designed and located to adequately assess the impact of a specific mining activity on surface water.

(5) Groundwater monitoring sites shall be designed and located as follows:

(a) Leachate monitoring wells shall be located within, or as close as physically practicable to, a storage or disposal facility for the following materials that are determined to be reactive, to determine the geochemical conditions of the facility.:

(i) Overburden.

(ii) Ore.

(iii) Waste rock.

(iv) Tailings.

(b) Compliance monitoring wells shall be located as close as physically practicable but not more than 150 feet from the mining activity being monitored. However, the department may approve an alternative water monitoring location if the operator demonstrates the location is protective of the environment and public health and safety, and a closer location is not feasible or effective.

(6) A permittee shall notify the department and shall institute an increased monitoring program as may be directed by the department at such time as sampling of leachate monitoring wells or compliance monitoring wells detects concentrations of a solute 2 standard deviations above the long-term average background level for 2 consecutive sampling events.

(7) An action level is reached at such time as sampling of leachate monitoring wells and compliance monitoring wells detects either of the following:

(a) Concentrations of a solute that equal or exceed  $\frac{1}{2}$  the level between the long-term average background and the drinking water standard for two consecutive sampling events.

(b) Concentrations of hydrogen ion, expressed as pH, that differ from the long-term average background by 0.5 units or more for 2 consecutive sampling events.

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(8) When an action level is reached as described in subrule (7) of this rule, then the permittee shall proceed in a timely manner to do the following:

(a) Implement increased monitoring as approved by the department.

(b) Conduct a source investigation to determine the cause of the change in water quality and provide a report on the investigation to the department.

(c) Implement a plan for response activity as approved by the department if the change in water quality is determined by the department to be caused by a release associated with a mining activity that is the responsibility of the permittee.

(9) Failure of a permittee to meet the requirements of subrules (6) to (8) of this rule shall constitute a violation of this part. Implementing actions required by this rule does not relieve the permittee from other obligations under this act.

**R 425.407 Postclosure monitoring.**

Rule 407. The postclosure monitoring period shall be 20 years following completion and approval of reclamation, subject to the following conditions:

(1) The permittee shall provide to the department a written request to terminate the postclosure monitoring not less than 18 months before the proposed termination date and shall provide the department with technical data and information demonstrating the basis for the termination. The department shall extend the postclosure monitoring period in increments of up to 20 years unless the department determines, approximately 1 year before the end of a postclosure monitoring period or postclosure incremental monitoring period, that there is no significant potential for water contamination resulting from the mining operation.

(2) The department may shorten the postclosure monitoring period at any time upon determining that there is no significant potential for water contamination resulting from the mining operation.

(3) The department may extend or shorten the postclosure monitoring period only after public notice and opportunity for a public hearing.

**R 425.408 Inspections by department.**

Rule 408. (1) The department may enter at all reasonable times in or upon a mining area for the purpose of inspecting and investigating conditions relating to the operation of a mining area.

(2) If the department receives an allegation of improper action under or a violation of part 632 of the act, these rules, or a mining permit, and the person making the allegation provides evidence or corroboration sufficient to support the allegation, as determined by the department, the department shall do all of the following:

(a) Make a record of the allegation.

(b) Conduct an inspection of the mining operation to investigate the allegation not more than 5 business days after receipt of the complaint or allegation.

(c) Not more than 15 business days after completing an investigation of the allegation, provide a written report of the allegation and the results of the investigation to the operator and the person who made the allegation.

(3) The department shall conduct a complete inspection and report of a nonferrous metallic mineral mining operation at least quarterly to determine compliance with the act and these rules. An inspection under subrule (2) of this rule or under R 425.207(2) shall satisfy the requirement of this subrule if the inspection is a complete inspection.



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**R 425.409 Treatment and containment of reactive materials.**

Rule 409. An operator shall manage overburden, ore, waste rock, peripheral rock, and tailings determined to be reactive under R 425.203(c)(v) in accordance with this rule and in a manner that is designed to reasonably minimize actual and potential adverse impacts on groundwater and surface water by preventing leaching or runoff of acid-forming waste products and other waste products from the mining process.

(a) An operator shall design, construct, and operate stockpiles or storage facilities for reactive overburden, ore, waste rock, or tailings in compliance with paragraph (i) or (ii) of this subdivision.

(i) A stockpile or storage facility shall meet the following requirements:

(A) A stockpile or storage facility shall have a composite liner system comprised of a flexible synthetic membrane that is not less than 60 mils thick and a layer of at least 3 feet of compacted soil having a maximum hydraulic conductivity of  $1.0 \times 10^{-7}$  cm/sec.

(B) The department may approve an alternative liner system that uses other materials or designs, including modified soil liners, or technologically advanced systems only if the operator provides data to demonstrate the alternative is capable of providing equivalent or better protection as compared to the requirements under subparagraph (A).

(C) A stockpile or storage facility shall have a leachate collection system. The system shall be designed, constructed, and operated to limit the hydraulic head at the lowest point in the system to not more than 1 foot, excluding the collection sump, after construction.

(D) A stockpile or storage facility shall have a leak detection system.

(E) The liner, leachate collection system, and leak detection system shall be tested before the placement of overburden, ore, waste rock, or tailings into the facility.

(F) A cover shall be employed to isolate the reactive overburden, ore, or waste rock from precipitation and air as soon as practicable.

(G) A registered professional engineer or other qualified individual shall certify the proper design, construction, and testing of all liners, covers, and leachate collection systems required by this paragraph. The permittee shall submit the certification to the department and shall not begin placement of ore, waste rock, overburden, or tailings in the storage facility until approved by the department.

(ii) Subject to approval of the department, an operator may utilize an alternative plan for a stockpile or storage facility for reactive overburden, ore, waste rock, or tailings. The department may approve an alternative plan only if the operator provides data that demonstrates that the alternative plan is capable of providing protection of groundwater and surface water that is equivalent to or better than that provided under paragraph (i) of this subdivision. The alternative plan shall incorporate 1 or more of the following:

(A) Measures to prevent the generation of leachate by adding a material or materials that counteract or neutralize the acid-forming or toxic characteristics of the ore, waste rock, overburden, or tailings.

(B) Measures to treat or neutralize any leachate that may be generated before it migrates outside of the storage facility.

(C) Measures to isolate the ore, waste rock, overburden, or tailings from oxygen and other oxidizing substances.

(D) Measures to isolate the ore, waste rock, overburden, or tailings from groundwater or surface water.

(b) An operator may utilize a disposal facility to manage, contain, or isolate reactive waste rock, tailings, overburden, or peripheral rock subject to approval of the department. A disposal facility may consist of a mined area that will be backfilled. The department shall not approve the plans for a disposal facility unless the operator demonstrates that the design, construction, operation, and closure of the disposal facility will reasonably minimize the actual and potential adverse impacts on groundwater and surface water by preventing leaching or runoff of acid-forming waste products and other waste products from the mining

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process and will not require perpetual care following closure in accordance with MCL 324.63209(8) and with R 425.204(b)(vi).

(c) A stockpile or storage or disposal facility under this rule shall be monitored in compliance with R 425.406.

(d) A permittee shall conduct and maintain grading or diking at stockpiles and storage or disposal facilities subject to this rule to assure that surface water drains away from the storage or disposal area.

**PART 5. REPORTS**

**R 425.501 Mining and reclamation report.**

Rule 501. (1) A permittee shall file an annual mining and reclamation report with the department; the city, village, or township where the proposed mining operation is located; and the Indian governing body having jurisdiction over an Indian reservation containing all or part of the mining area or affected area. The report shall be filed in printed and electronic format on or before March 15 of each year during the period the mine is operating and during the postclosure monitoring period. The department shall post a copy of the report on the department website. The report shall contain all of the following:

(a) A map or maps drawn to an appropriate scale on a topographic base and referenced to the nearest government-surveyed section or quarter-section lines, accompanied by appropriate documents or notations, depicting and describing all of the following as they existed on December 31 of the previous year:

(i) The locations and dimensions of portals, shafts, or other openings between the land surface and underground mine workings.

(ii) The location, depth, and contours or slopes of surface pits, underground mine excavations, or both.

(iii) The location of buildings, equipment, roads, railroad spurs, power supplies, fuel storage, or other pertinent features within the mining area.

(iv) Overburden, waste rock, and ore stockpiles.

(v) Settling ponds and tailings disposal areas.

(vi) Drainage control structures and grading.

(vii) Areas that the permittee has reclaimed during the past calendar year.

(viii) Areas that the permittee anticipates will be reclaimed during the current calendar year.

(ix) The name of the person or persons responsible for the preparation of the report, and the date of preparation.

(b) An update of the contingency plan. The permittee shall provide a copy of the update to the emergency management coordinator.

(c) A report of monitoring, leak detection, inspection, and leachate collection results for the preceding calendar year.

(d) A report of the total tons of material mined from the mining area, and the amount of metallic product by weight, produced from the nonferrous metallic mineral mine for the preceding calendar year.

(e) An updated organization report.

(f) An update of the characterization of reactivity of the ore, waste rock, and overburden that will be mined, and peripheral rock that will be exposed in the process of mining, and of any tailings that will be generated.

(g) A list and summary of the reports required under R 425.503(1) for the preceding calendar year.

(2) Records upon which the mining and reclamation reports are based shall be preserved by the permittee for 3 years and made available to the department upon request.

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(3) A permittee shall file with the department an updated estimate of the cost of reclamation for mining activities planned for the current and succeeding 2 years of operation of the mine on or before March 15 of every third year after issuance of the mining permit.

**R 425.502 Update of contingency plan.**

Rule 502. In addition to the annual update of the contingency plan required in R 425.501(1)(b), a permittee shall promptly provide an update of the contingency plan to the department and the local emergency management coordinator whenever either of the following occurs:

- (a) A change of the notification process or local representatives of the permittee.
- (b) A substantial change in the site conditions or equipment noted on the plan.

**R 425.503 Report of incident.**

Rule 503. (1) A permittee shall promptly notify the department, and each emergency management coordinator having jurisdiction over the affected area, of any incident, act of nature, or exceedance of a permit standard or condition at a mining operation that has created, or may create, a threat to the environment, natural resources, or public health and safety.

(a) The notification shall be made as soon as possible following the incident, act of nature, or exceedance, by telephone or in person, to an authorized representative of the department during normal business hours or to the department pollution emergency alerting system between 5 p.m. and 8 a.m. and on weekends and holidays.

(b) The permittee shall submit to the department a detailed written incident report giving the particulars of the incident, act of nature, or exceedance within 10 days of discovery. The report shall include all of the following information, to the extent known:

- (i) The name of permittee.
- (ii) The name of the person reporting the incident, act of nature, or exceedance.
- (iii) The date and time of the incident, act of nature, or exceedance.
- (iv) The nature of the incident, act of nature, or exceedance.
- (v) The nature and degree of the threat to the environment, natural resources, or public health or safety.
- (vi) Response actions taken or planned.

(c) If the response to the incident, act of nature, or exceedance is not concluded at the time the incident report is filed as required by subdivision (b) of this subrule, then the permittee shall submit to the department a written final incident report within 30 days after the incident response is concluded. The final incident report shall contain a summary of the initial incident report and an account of all response actions taken. If the final response to the incident, act of nature, or exceedance is not concluded within 30 days, then the department may require periodic progress reports.

(2) Records upon which reports under subrule (1) of this rule are based shall be preserved by the permittee for 3 years or until the end of the postclosure monitoring period, whichever is later, and shall be made available to the department at all times.

**PART 6. MEETINGS AND HEARINGS**

**R 425.601 Public meetings on prospective mining operations.**

Rule 601. The department may hold a public meeting or meetings at any time after it determines that there is a reasonable likelihood that a person will apply for a permit authorizing mining operations regulated under part 632 of the act. The purpose of the public meeting or meetings shall be to provide information on the regulation of nonferrous metallic mineral mining and to receive public comment on prospective

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nonferrous metallic mineral mining operations. This rule shall not prevent a local unit of government from taking any lawful action under section 63203(4) of the act.

**R 425.602 Contested case hearing.**

Rule 602. (1) Any person who is aggrieved by an order, action, or inaction of the department or by the issuance, denial, revocation, termination, or amendment of a mining permit under part 632 of the act may file a petition for a contested case hearing with the department. Following the filing of a petition, the State Office of Administrative Hearings and Rules shall conduct a hearing and issue a proposal for decision in accordance with provisions for contested cases in 1969 PA 306, MCL 24.201 et seq. and R 324.1 to R 324.81. Unless waived by the parties, the department shall issue a final decision on a petition for a contested case hearing within 6 months after receiving the petition.

(2) A determination, action, or inaction by the department following a contested case hearing shall be subject to judicial review as provided in 1969 PA 306, MCL 24.201 et seq.

(3) A petition shall be in writing and shall set forth the basis for the filing of the petition. A petition filed more than 60 days after the petitioner knew, or reasonably should have known, of an order, action, or inaction of the department or a decision on a mining permit may be rejected as being untimely.